

Policy, Research, and External Affairs

**WORKING PAPERS**

Welfare and Human Resources

Population and Human Resources  
Department  
The World Bank  
August 1990  
WPS 467

# Structural Adjustment and Living Conditions in Developing Countries

Nanak Kakwani  
Elene Makonnen  
and  
Jacques van der Gaag

By and large, social indicators in developing countries improved in the 1980s, but progress was slowest in the countries that needed it the most. The data show unacceptably high mortality rates, low school enrollment levels, and extensive undernutrition in many parts of the world. Of particular concern are the declining primary enrollment ratios in intensely adjusting countries. This erosion of human capital is inconsistent with the main objectives of adjustment: sustainable long-term growth.

FILE COPY

The Policy, Research, and External Affairs Complex distributes PRE Working Papers to disseminate the findings of work in progress and to encourage the exchange of ideas among Bank staff and all others interested in development issues. These papers carry the names of the authors, reflect only their views, and should be used and cited accordingly. The findings, interpretations, and conclusions are the authors' own. They should not be attributed to the World Bank, its Board of Directors, its management, or any of its member countries.

## WORKING PAPERS

Welfare and Human Resources

WPS 467

This paper — a product of the Welfare and Human Resources Division, Population and Human Resources Department — is part of a larger effort in PRE to assess the impact of adjustment on living standards in developing countries. It was prepared as background for the Second Report on Adjustment Lending (RAL II). An extended version of this paper was presented at the World Bank/IFPRI Poverty Research Conference in October 1989. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Brenda Rosa, room S9-137, extension 33751 (57 pages, including tables).

Kakwani, Makonnen, and van der Gaag compare trends in per capita private consumption, social sector indicators, and government spending in the social sectors, between countries that received Bank adjustment loans and countries that did not.

Most surprising was the lack of response in absorption to adjustment measures. Intensely adjusting countries showed *more* growth in private consumption in 1985-87 than did nonadjusting countries. Moreover, the government's role relative to GDP *increased* rather than decreased. This remains the case in some intensely adjusting countries even if interest payments are not considered.

There is little a priori reason, then, to believe that the poor are being hurt by adjustment because absorption is reduced. But there is still cause for concern: real per capita spending in the social sectors decreased in many countries, especially those adjusting intensely.

Health-related data show continued progress in the 1980s, probably even faster than in the 1970s, for adjusting and nonadjusting countries alike. Food production data show total per capita growth of 10 percent for 1980-87 — but significant growth in Asia overshadowed large declines in Africa, Europe, and the Middle East. Undernutrition increased in low-income African countries but was reduced everywhere else.

School enrollment rates improved significantly in the 1970s but only a little in the 1980s — and in some countries declined. Primary enrollment ratios tended to decline in the adjusting countries, especially those that reduced per capita spending on education.

Still, the data do *not* show a clear overall relationship between adjusting and nonadjusting countries in trends in most of the social indicators. By and large social indicators improved in the 1980s — but progress was slowest in the countries that needed it the most.

Improving the living conditions of the poor calls for growth-oriented policies, the effects of which will be felt only in the long run. During adjustment, immediate interventions are needed to mitigate short-run welfare losses experienced by readily identifiable groups.

The analytical foundations of those interventions must be strengthened. And long-term social sector policy must be developed to guarantee *sustainable* success against the correlates of poverty. Such policies have been shown to be feasible and affordable and hold for adjusting and nonadjusting countries alike.

# Structural Adjustment and Living Conditions in Developing Countries

	Page
I. Background . . . . .	1
II. Growth Rates in Private Consumption . . . . .	13
III. Social Welfare Expenditures . . . . .	17
IV. Infant and Child Mortality, and Immunization . . . . .	24
V. Food Production, Undernutrition and Protein Intake . . . . .	31
VI. School Enrollment . . . . .	43
VII. Concluding Remarks . . . . .	47
Annex . . . . .	49
Endnotes . . . . .	56

## LIST OF TABLES

TABLE 1: Characteristics of Country Groupings . . . . .	7
TABLE 2: Adjustment Lending Countries . . . . .	8
TABLE 3: Annual Growth Rates of Real Per Capita Private Consumption . . . . .	13
TABLE 4: Average Ranks of Countries Ranked by Growth in Per Capita Private Consumption . . . . .	15
TABLE 5: Per Capita Consumption at 1980 PPP Dollars and Percentage Change . . . . .	15
TABLE 6: Welfare Expenditure as Percentage of Total Expenditure and Expenditure as Percentage of GDP . . . . .	20
TABLE 7: Per Capita Welfare Expenditures in 1980 PPP Dollars . . . . .	22
TABLE 8: Infant Mortality (Percentage Decline) . . . . .	25
TABLE 9: Percentage Decline in Child Mortality . . . . .	26
TABLE 10: Infant Mortality Rates: DHS and World Bank Data . . . . .	28
TABLE 11: Immunization Coverage . . . . .	30
TABLE 12: Number of Countries with Negative Growth Rates of Per Capita Food Production . . . . .	32

**Table of Contents Continued:  
List of Tables**

<b>TABLE 13: Per Capita Food Production Index . . . . .</b>	<b>33</b>
<b>TABLE 14: Undernutrition . . . . .</b>	<b>36</b>
<b>TABLE 15: Per Capita Protein Intake . . . . .</b>	<b>40</b>
<b>TABLE 16: Gross Enrollment Ratio (Primary) . . . . .</b>	<b>43</b>
<b>TABLE 17: Net Enrollment Ratio (Primary) . . . . .</b>	<b>44</b>
<b>TABLE 18: Student-Teacher Ratio . . . . .</b>	<b>45</b>
<b>TABLE 19: Growth Rate of Primary School Teachers . . . . .</b>	<b>46</b>

## STRUCTURAL ADJUSTMENT AND LIVING CONDITIONS IN DEVELOPING COUNTRIES

### I. BACKGROUND

This paper was prepared as background for the Second Report on Adjustment Lending (RAL II) to assess the impact of adjustment on living standards in developing countries. The paper attempts to do this by comparing trends between the Bank's adjustment and non-adjustment lending countries in per capita private consumption, social sector indicators and government expenditures in the social sectors.

The World Bank started making adjustment loans (SALs) in 1980. Over the years, adjustment programs have increasingly been criticized on the ground that they have had adverse effects on the living standards of the people in the developing countries. They would result in a fall in real wages, sharp rises in interest rates, and an increase in tax rates. Fiscal austerity would lead to reductions in government expenditures, curtailment of consumer subsidies and high unemployment. This, in turn would result in considerable deterioration in the living standards of the economically weaker sections of the population in a large number of countries.

Theoretically, adjustment programs can directly affect the living conditions of the population in two ways: through adsorption reduction (that is, reductions in consumption, government expenditures and investment) and through expenditure switching, generally from the non-tradeable to the tradeable sector. The effects of these two broad policy changes on the living conditions of the poor are not easy to trace. First of all, there is much confusion in the debate on the effect of adjustment on the poor, about who the poor are. When the focus is on the direct impact of such measures as reduction of public employment or of general food price subsidies - both closely related to the political sustainability of adjustment - the groups referred to as "the poor" are most often low wage civil servants and city dwellers who depend entirely on the market for their food products. However in most countries, public wage earners are considerably better-off than the population in the lowest 20 or 30 percent of the income distribution who live

mostly in rural areas. Moreover, to the extent that these rural poor are net producers of food crops, increased food prices will actually benefit them. Thus a sharp distinction needs to be made between those that are directly hurt by new policy measures (say, the "new poor") and those that were poor prior to adjustment.

This distinction is also relevant for the discussion of targeting so-called compensatory measures. To take the example of laid-off public servants: perfect targeting - if so desired - is possible. The names and addresses of all directly affected are known. Compensatory payments, retraining courses and assistance in finding alternative employment can be tailored to their needs. To cushion the effect of adjustment on the "pre-adjustment poor" and on those indirectly affected by adjustment measures, is considerably more difficult.

To study the effects of such macro-economic policies as exchange rate devaluation, trade liberalization, or price and interest rate reforms, on the people's welfare, it would be necessary to separate their impact from many of the other internal or external influences operating before and after the adjustment period. This would require an elaborate general equilibrium model for the world economy and its linkages with specific countries. Ideally, such a model should also incorporate changes in the world economy long before the crisis periods.

In summary, there is currently little theoretical guidance to help judge the impact of any of the more standard features of adjustment on the poor. In addition, adjustment programs are highly complex packages of policy measures. A review of the conditionalities in the Bank's structural and sector adjustment projects (SALs and SECALs) shows that an average of 40 conditionalities per project have been specified under these programs. (See Annex.) The linkages between these conditionalities and the standard of living are in some cases positive, in other cases negative, and - most commonly - ambiguous. Therefore, the best one can do is to measure the impact of various components of adjustment programs on poverty. Such attempts have, for instance, been made by Behrman and Deolalikar (1989), Glewwe and de Tray (1987, 1989), Kakwani (1989), Kanbur (1987), and Laraki (1988).<sup>1</sup> The findings of the impact of adjustment on the poor in Côte d'Ivoire and Jamaica from two of these references are highlighted in Boxes 1 and 2.

Although tracing the impact of adjustment measures on the living conditions of the poor remains a difficult task, the experience with the implementation of SALs has clearly heightened the awareness of the World Bank and its borrowers to the distributional consequences of adjustment programs and the political sustainability of adjustment. This has, in turn, placed issues pertaining to the transitional welfare loss during adjustment high on the Bank's agenda. The World Bank's first formal statement on the potential social costs of adjustment came with the release of the Development Committee paper Protecting the Poor During Periods of Adjustment<sup>2</sup> at the 1987 IBRD/IMF Annual Meetings. Soon thereafter operational guidelines were issued requiring all the President's reports for adjustment lending to pay particular attention to "analysis of the short-term impact of the adjustment program on the urban and rural poor and measures proposed to alleviate negative effects."<sup>3</sup> Subsequently, measures to protect the poor during adjustment have increasingly been included as components in SALs. In addition, the Bank has also supported self-standing projects explicitly designed to mitigate the social costs of adjustment. However, the experience to date suggests that the current approach lacks rigorous analysis and is ad hoc. A brief overview of how the social aspects of adjustment are currently being addressed in the design and implementation of adjustment programs is presented in the Annex.

Notwithstanding the growing concern over the issue of the social costs of adjustment, the empirical evidence documented by researchers in and outside the World Bank is still wanting. Within the Bank, there has clearly been an expansion of sector and analytical work in the area of poverty and adjustment; but a methodology to measure the impact of adjustment on the poor does not yet exist. On the research front, work based on household data from the Living Standard Measurement Surveys (LSMS) continues to provide valuable insight. Examples of some LSMS-related research on adjustment and poverty include the work cited earlier by Glewwe and de Tray (1987, 1989), Kanbur (1987), and Kakwani (1989). LSMS generated data are now increasingly being used in Bank operations to help identify the winners and losers during adjustment.

Outside the World Bank, UNICEF has played a leading advocacy role for protecting the poor during adjustment. In a widely publicized study Adjustment with Human Face<sup>4</sup> UNICEF drew attention to the deteriorating social condition of the world's poor during the eighties and raised the consciousness

of the development community about the possible social implications of adjustment policies that seemed to focus solely on macroeconomic indicators. In addition, UNICEF's latest "State of the World's Children" also estimates that at least half a million young children have died in the last twelve months as a result of the slowing down or the reversal of progress in the developed world.<sup>5</sup>

However, it should be noted there is some work that suggests UNICEF may have overstated the case. For instance, in a critical review of Adjustment With a Human Face, Preston (1986)<sup>6</sup> notes that the data on most of the countries reviewed show continuous improvements in infant and child mortality, nutritional indicators, and school enrollment. In a recent program audit report by the Operations Evaluation Department of the World Bank, Behrman and Deolalikar assess the analytical base for the UNICEF Jamaica case study. They conclude that while adjustment programs may have deteriorous effects on health and nutrition, the empirical evidence presented to date is not very convincing due to confusion among levels, trends, and deviations from the trends and questionable data interpretations.<sup>7</sup> Hill and Pebley (1989), after a careful evaluation of the available evidence in trends of child mortality also found no evidence of a slowdown in the pace of decline in child mortality at least on a regional basis and for countries with reliable data. They note that the decline in child mortality appears to have accelerated in sub-Saharan Africa..., despite the poor economic performance of many countries."<sup>8</sup>

Three reasons contribute to the existence of such contradictory assessments from what, in many cases, is essentially the same evidence. First, as stated earlier, the evidence for one position or the other is relatively weak. Data on living conditions of the poor in the developing world are scarce and often of dubious quality. This is especially the case if international comparable data are needed over a relatively long period of time. Even the best of such data are usually a mixture of true information plus many interpolations and--worse--extrapolations on the basis of which it is hard to judge trends. Second, adjustment policies are a relatively new phenomenon. Their impact on such basic social indicators as child mortality and life expectancy may not be noticeable instantaneously. Long time-lags may prevent one analyst from detecting any impact in the current data, while others may give more weight to theoretically plausible implications and



partial or anecdotal evidence. The third problem arises from the inherent difficulty in establishing causality. If countries had adopted alternative policies, rather than take Bank and IMF supported adjustment measures, would they have done better or worse? Would the living conditions of the poor have improved or deteriorated?

This study starts with the premise that, though it is not clear a priori whether the poor will be more or less hurt by adjustment policies, in general the contractions are likely to reduce welfare levels. Therefore, as a first step, the study investigates to what extent the trends in private consumption and government expenditures actually differ between adjusting and non-adjusting countries.

As a second step, rather than attempt to answer the hypothetical question: "would living standards have been better under alternative adjustment strategies?" the study takes another look at the current evidence on trends in socio-economic indicators such as infant mortality and malnutrition in the developing world during the eighties. These trends are compared with the evidence for the seventies to assess whether it is indeed justified to refer to the eighties as "the lost decade for development", as is now sometimes done. Finally, the study tries to assess whether, during the eighties, the trends in social indicators differed significantly between adjusting and non-adjusting countries.

For a comparison between the performance of adjusting and non-adjusting countries, countries are grouped according to their "adjustment lending" status. Adjusting countries will be divided into three groups:

- IAL - Intensely adjusting countries; those that received 3 or more structural adjustment loans (SALs) or had 2 completed SALs. Lending started in or before 1985.
- "pre-1986" - Countries that received less than three SALs but were included in the program before 1985.
- "post-1985" - Countries that received adjustment loans after 1985. (1986-88).

Countries which did not receive SALs will be divided into two groups:

- NAL+ - those that had an increase in average annual per capita GDP growth during the period 1980-87.

NAL- - those that had a decrease in average annual per capita CDP growth during 1980-87.

The NAL+ group can be thought of as countries that do not need IMF/World Bank type of adjustment measures unless, of course, the policies they pursue are unsustainable. Among the NAL- countries one would expect potential "adjustment" candidates. It is worth noting that most adjusting countries started the policy reforms after a period of economic deterioration. The NAL- countries are therefore probably the closest one can get to a counterfactual. Tables 1 and 2 present the grouping of countries according to their adjustment lending status and the characteristics of each country grouping.

The paper will be organized in seven sections. Section II will present trends in growth rates in private consumption. Section III will look at the trends in government welfare expenditures. Health indicators such as infant and child mortality and immunization will be discussed in Section IV. Section V will look at food production, undernutrition and protein intake. Section VI will look at primary school enrollment. The concluding remarks will be in Section VII. A brief overview of adjustment conditionalities and the Bank's approach to addressing the social costs of adjustment is presented in the Annex.

The data for the analysis is acquired from the World Bank's Economic and Social Database (BSED) and the International Economic Department's retrieval, analysis and reporting system (ANDREX). BSED includes more than 20 databases from the World Bank, IMF, UN, UNESCO, UNIDO, and FAO.

**Table 1: Characteristics of Country Groupings**

Countries	Number of Countries	Low Income	Middle Income	Highly Indebted	Oil Exporting	Primary Commodity Exporting	Manufacture Exporting	Africa	Asia	EMENA	LAC
IAL	25	10	15	11	2	13	10	12	4	2	7
PRE-1986	11	6	5	3	1	6	4	6	0	1	4
POST-1985	19	4	5	1	3	11	5	11	4	2	2
NAL	31	11	20	2	7	15	11	8	5	9	9
NAL+	16	5	11	1	3	7	6	4	4	6	3
NAL-	15	6	9	1	4	8	3	4	1	3	6
ALL	86	40	46	17	13	45	28	37	13	14	22

IAL: Countries that received three or more adjustment loans (SALs and SECALs) (intense adjusting countries). Lending starts on or before CY 1985.

PRE-1986: Countries that received less than three adjustment loans. Lending starts on or before 1985.

POST-1985: Countries that received less than three adjustment loans. Lending starts on or before 1985 (1986-88).

NAL: Countries that received no adjustment loans in CY 1980-1988.

NAL+: Countries that received no adjustment loans but attained an increase in GDP per capita growth during 1980-87.

NAL-: Countries that received no adjustment loans and had a decline in per capita growth during 1980-87.

Table 2: Adjustment Lending Countries

Region	IAL		PRE-1986		POST-1985		TOTAL NAL (+ denotes NAL+ countries)	
	Low-income	Middle-income	Low-income	Middle-income	Low-income	Middle-income	Low-income	Middle-income
Africa	Ghana Kenya Madagascar Malawi Mauritania Nigeria Tanzania Togo Zambia	Côte d'Ivoire Mauritius Senegal	Burkina Faso Guinea-Bissau Sierra Leone Sudan Uganda	Zimbabwe	Burundi CAR Chad Congo Gambia Guinea Mali Niger Somalia Zaire	Gabon	Benin + Rwanda + Ethiopia Lesotho Liberia Mozambique	Botswana + Cameroon +
Asia	Pakistan	Korea Thailand Philippines			Bangladesh China Indonesia Nepal		Burma + India + Sri Lanka +	Malaysia + Papua N Guinea
Emena		Morocco Turkey		Yugoslavia		Hungary Tunisia	Yemen PDR	Egypt + Jordan + Oman + Poland + Portugal + Yemen AR + Algeria Syria
LAC		Bolivia Brazil Chile Colombia Costa Rica Jamaica Mexico	Guyana	Ecuador Panama Uruguay		Argentina Honduras	Haiti	Domin. Rep. + Paraguay + Peru + El Salvador Guatemala Nicaragua Trin. & Tobago

## BOX 1

Côte d'Ivoire: Adjustment and the Poor in Africa

Côte d'Ivoire enjoyed high rates of growth in the 1960's and 1970's, led by exports of coffee and cocoa. From 1975 to 1977, the international prices of these two commodities boomed, which allowed the government to undertake a substantial public investment program. Yet coffee and cocoa prices fell precipitously from 1977 to 1980, bringing about a crisis that led the Ivorian government to undertake massive cuts in public expenditures. The Ivorian economy responded by contracting sharply in the early 1980's: per capita GDP fell by 26.2% from 1980 to 1984 and per capita private consumption fell by 22.6%. A severe drought in 1983 compounded the problems faced by the Côte d'Ivoire.

The Ivorian government launched a structural adjustment program at the end of 1981 with support from the IMF's Extended Fund Facility (EFF). The first two structural adjustment loans from the World Bank were in 1981 and 1983. Among the structural adjustment policies were a freeze on government salaries, greatly reduced public investment, increases in various taxes (vehicles, insurance, property and business licenses), and increasing producer and consumer prices for various foodstuffs (cf. Kanbur, 1988). The increased prices for food were in part an attempt to raise domestic production. These measures had a different effect on urban and rural areas. Most government workers are found in urban areas, where virtually no one grows a substantial amount of their own food, while rural residents grow much of their food and are by and large net producers. The overall effect of food price increases was to increase the rural-urban terms of trade by about 12% from 1982 to 1984.

What were the implications for the poor of the Ivorian structural adjustment program? Given the decline in the international prices of its major export crops, and the severe drought in 1983, which no policy could stop, there is little doubt that the poor were worse off in the mid-1980's than in 1980. A recent study based on LSMS data (Kanbur) found that the incidence of poverty in Côte d'Ivoire is highest on food crop farmers (50 percent) and export crop farmers (36 percent). This is followed by those in the informal sector (19 percent), formal sector (6 percent) and the government sector (3 percent).

Were the poor hurt more than average? Table 1 presents household survey data from Côte d'Ivoire in 1985. It shows that most of the poor, especially the poorest 10% are found in rural regions in Côte d'Ivoire. The fact that the rural-urban terms of trade went in favor of rural areas from 1982 to 1984 suggests that the poor were at least partially protected from the adverse effects of adjustment.

A study by Kakwani (1989) supports this. By decomposing changes in poverty into two components, those due to changes in the mean level of income and those due to changes in the distribution of income, he argues that poverty in Côte d'Ivoire did indeed increase by 5% per annum in Côte d'Ivoire in the early 1980's. However, he concludes that "if the government had not pursued the policies of improving agricultural prices, the increase in poverty would have been about 14% per annum."

In summary, it seems that at least some of the adjustment policies of the Ivorian government were well designed from the perspective of safeguarding the poor. This does not mean that poverty did not increase, but that given the severe external shock to the economy the increase in poverty was not as large as it might otherwise have been. The lesson here is that some adjustment policies can correct macro-economic imbalances and reduce the impact of external shocks on the poor.

Table 1: Location of the Poor by Region in Côte d'Ivoire, 1985

Region	Poorest 10%	Poorest 30%	Total Population
Abidjan	2.0%	3.5%	18.5%
Other Urban	2.0	10.8	22.4
West Forest	8.1	11.2	15.2
East Forest	31.3	34.4	24.7
Savannah	56.8	40.1	18.9

Source: Glewwe and de Tray, 1988

BOX 1 Continued:

References

Glewwe, Paul, and Dennis de Tray. 1988. "The Poor During Adjustment: A Case Study of Côte d'Ivoire." Living Standards Measurement Study Working Paper No. 47. The World Bank.

Kakwani, Nanak. 1989 "Poverty and Economic Growth with Applications to Côte d'Ivoire." Welfare and Human Resources Division. The World Bank

Kanbur, Ravi. 1988. "Poverty Alleviation Under Structural Adjustment: A Conceptual Framework and its Application to the Côte d'Ivoire." SDA Unit. World Bank.

## BOX 2

Jamaica: Adjustment and the Poor in the 1980's

Jamaica's performance from the late 1940's to the early 1970's was impressive whether measured by economic or social indicators. Yet a prolonged economic decline began in 1972 and many educated Jamaicans left the island for better prospects. To compensate for declines in income the government expanded government services, still by 1980 per capita GDP had fallen 18% from its 1972 level. In that year a new government was elected which put more emphasis on the private sector and export-oriented growth. Unfortunately, in the early 1980's the international prices of bauxite and alumina dropped precipitously, which forced the government to cut its spending severely. Between 1982/83 and 1985/86 real government spending on social services dropped by 40%. By 1986, economic growth resumed and continued into 1988. This recent upturn has been due in part to the revival of the tourist industry as well as some stabilization in the international alumina and bauxite markets. An unfortunate recent setback was Hurricane Gilbert, which struck in September, 1988, and caused billions of dollars of damage.

The IMF provided support for Jamaica in 1978 and again in 1981 from its Extended Fund Facility (EFF). In both cases IMF targets were not met in the following year and negotiations had to begin again. Jamaica also received three structural adjustment loans from the World Bank between 1982 and 1984, totaling \$186.4 million. These loans were made conditional on scaling down government intervention in the economy, reducing trade restrictions, and other common structural adjustment policies. Some of these policies proved to be unpopular and led to strikes and even riots. In response to worries that the structural adjustment policies may lead to declines in the living standards of the poor the government initiated several programs in 1984 aimed at reducing the alleged social costs of adjustment. In 1987 these were brought under the jurisdiction of a new government entity, the Social Well-Being Programme (SWP). After the 1989 elections, the new government adopted a revised version of this program under the name Human Resources Development Programme (HRDP).

The major policy initiatives undertaken to compensate persons thought to be hurt by structural adjustment were: 1. The Food Stamp Programme, which provides food stamps to mothers and small children, as well as to elderly and low-income individuals; 2. Generalized food subsidies, started in 1986, for wheat flour, rice, cornmeal and powdered milk; 3. Provision of school lunches (nutri-bun and milk) to selected primary age children; 4. Job training for the unemployed, especially youths and women; and 5. A variety of steps to strengthen the delivery of primary health care services to the population.

Two questions arise regarding the experience of Jamaica in the 1980's: 1. What was the impact of the economic downturn on the living conditions of the poor?; and 2. What effect did the social actions have in removing any possible negative effects? While some (e.g. Boyd, 1986) argue that the poor suffered a substantial deterioration in their quality of life as a result of structural adjustment, Behrman and Deolalikar, among others, contend that a "focus on deviations from secular trends...leads to a much less negative assessment" (1988, pp.92-93). To look at changes over time, two sources of data are available, national aggregate data on different social indicators, such as school enrollment, infant mortality, calorie intake, etc., and a set of three nutrition surveys undertaken at critical points in time, 1978, 1985 and 1989. Although causality is difficult to assign, tracking the changes in these data does provide some information for understanding the Jamaican experience with structural adjustment.

Table 1: Social Indicators for Jamaica: 1980-1987  
Private Consumption/Capita   Average Daily   Primary School   Infant Mortality

<u>Year</u>	<u>(Constant 1980 J\$)</u>	<u>Calorie Intake</u>	<u>Enrollment</u>	<u>Rate</u>
1980	1518.5	2582	101	-
1981	1468.6	2554	104	-
1982	1513.3	2520	106	21
1983	1613.9	2583	106	-
1984	1638.5	2594	-	-
1985	1584.1	2559	-	-
1986	1519.7	2590	-	-
1987	1652.4	-	-	18

Source: World Bank Data Base

## BOX 2 Continued:

Data on aggregate social indicators are given in Table 1. Real private consumption per capita was already rather low in 1980, and fell to a lower level in 1981. However, after 1981 private consumption increased steadily up to 1984 (i.e. after the first adjustment loans). It dropped again in 1985 and in 1986, reaching about the same level as was seen in 1980. Finally, it increased again in 1987. In summary, the average consumption levels of the population fluctuated substantially from 1980 to 1987, but there seems to be no apparent link with the initiation of the adjustment program. Turning to the calorie data, there is very little fluctuation and thus almost no evidence of the impact of adjustment. Primary school enrollment data are lacking after 1983, but up to that point they show a small but steady increase. Infant mortality data show a decline from 1982 to 1987. In summary, the evidence is not conclusive, but the data fail to show a direct link between the structural adjustment program and Jamaica's social indicators in the 1980's. There is little that can be said about the effectiveness of the SWP/HRDP.

Table 2: Malnutrition in Jamaica (Age 4 Years and Under): 1978, 1985 and 1989

Survey	Moderate Malnutrition	Severe Malnutrition	Total Malnourished
1978 MOH	13.4%	.9	14.3%
1985 MOH	13.6%	1.0%	14.6%
1989 SLC	8.5%	0.7	9.2%

Note: MOH=Ministry of Health, SLC=Survey of Living Conditions.  
Malnutrition defined as low weight for age with reference to median heights.

Table 2 examines data from three household surveys on the prevalence of malnutrition in Jamaica. To the extent that malnutrition is most common among the poor, these data should provide some assessment of the impact of adjustment and the SWP/HRDP on the poor. From 1978 to 1985 the percentage of young children with low weight for age declined slightly, indicating no major increase in malnutrition from the introduction of the structural adjustment program. By 1989 the extent of malnutrition had been substantially reduced, from 14.6% to 9.2%. This suggests that some of the support measures were effective. Indeed, Table 3 shows that the food stamp aspect of the program has been effective in reaching the poor. However, the general food subsidy program tends to provide more assistance to the better off groups than to the poor. The food stamp program in Jamaica provides a good example of an effective, sustainable, government intervention to safeguard the nutritional status of the most vulnerable groups in society, while generalized food subsidies appear to be a much less attractive alternative.

Table 3: Program Benefits by Income Quintile

Program	1 poorest	2	3	4	5 richest	All Jamaica
Gen. Food Subsidies	14	20	20	21	26	100
Food Stamps	31	26	20	16	8	100
Schooling Feeding	32	24	21	14	10	100

Source: "Survey of Living Conditions", Statistical Institute of Jamaica, (1988).

## References

Behrman, Jere, and Anil Deolalikar. 1989. "Impact of Macro Economic Adjustment on the Poor and on Social Sectors in Jamaica." Special Supplement: Program Performance Audit Report on Jamaica, OED Report No. 8018, World Bank, pp. 55-184.

Boyd, Derick. 1986. "The Impact of Adjustment Policies on Vulnerable Groups: The Case of Jamaica." Mona, Jamaica: The University of the West Indies.

Statistical Institute of Jamaica World Bank. 1988. "Preliminary Report: Living Conditions Survey." Kingston, Jamaica.



## II. GROWTH RATES IN PRIVATE CONSUMPTION

In this section growth rates in private consumption during the 1971-87 period are considered. Private consumption is the market value of all goods and services purchased or received, including income in kind, by households and non-profit organizations. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. Table 3 presents the growth rates of real per capita consumption calculated using private consumption at constant local currency. The aggregation of growth rates was done by means of weighted averages using population weights.

Table 3: Annual Growth Rates of Real Per Capita Private Consumption

Country Classification	1971-79	1980-84	1985-87	1980-87
Low income	1.4	4.4	1.3	3.2
Middle income	4.0	0.3	1.1	0.6
AFRICA	0.8	-1.1	-1.3	-1.2
EMENA	5.3	0.6	0.9	0.7
ASIA	1.7	5.1	1.7	3.8
LAC	3.7	-0.8	1.4	0.6
IAL	2.9	0.4	1.2	0.7
PRE-1986	4.2	-1.3	1.3	-1.3
POST-1985	2.3	5.8	1.5	4.2
NAL+	0.7	3.1	1.9	2.6
NAL-	3.4	-0.6	-2.9	-1.4
All Developing Countries	2.0	3.3	1.3	2.6

The table indicates that for all developing countries, real per capita consumption grew at an average of 2.6 percent during the eighties, an improvement of 0.6 percentage points over the seventies. There are however pronounced regional differences. The improvement for all developing countries can be attributed to the more than doubling of average growth rate in per capita private consumption for the Asian countries as a group from 1.7 percent during the 1970s to 3.8 percent during the 1980s. These averages are largely

influenced by the record of the two populous Asian countries. China's growth in per capita private consumption increased from 2.3 percent in the 1970s to 5.3 percent in the 1980s and that of India increased from 0.2 percent to 3.1 percent during the same period. When we compare the performance of countries grouped by their adjustment lending status, we find that improvements over the two periods associated with adjustment lending, that is, 1980-84 and 1985-87, occurred only in the intensely adjusting countries.

To summarize the changes in the relative performance of countries over time, we calculated the average ranks of various country classifications by ranking all the developing countries (from low to high) by their growth rates in per capita consumption. Table 4 shows the results. For instance, the IAL countries, after falling behind in the early eighties, improved their average rank from a value of 33.2 in 1980-84 to 44.3 in 1985-87 which is clearly a significant improvement. Similarly, during the same period, pre-1986 countries improved their average rank from 35.2 to 41.3. The relative position of NAL-countries deteriorated sharply.

Finally, in Table 5 we present average per capita private consumption levels at 1980 PPP dollars weighted in population by each group. The last two columns present the percentage change in the average per capita consumption over the periods 1980-84 to 1985-87 and 1970's to 1980's.

Not surprisingly, African countries show, on average the lowest per capita consumption levels. The consumption levels of non-adjusting countries are considerably larger than those of the adjusting countries. For all developing countries, per capita consumption in the 1980s is about 14 percent higher than in the 1970s. However, in Africa and Latin America, there have been declines of about 7 percent and 3 percent, respectively, during the later part of the eighties. Per capita consumption levels were higher in the 1980s than in the seventies by about 8 percent in IAL countries and 17 percent in "post-1985" countries. But "pre-1986" countries saw their levels decrease about 14 percent (from \$568 1980 PPP to \$491).

**Table 4: Average Ranks of Countries Ranked by Growth in Per Capita Private Consumption**

Country Classification	1971-79	1980-84	1985-87	1980-87
IAL	36.0	33.2	44.3	37.0
PRE-1986	36.7	35.2	41.3	38.0
POST-1985	38.2	40.6	40.3	40.8
NAL+	42.6	54.1	41.3	54.3
NAL-	42.9	31.2	21.6	20.7
All Developing Countries	39.0	39.0	39.0	39.0

**Table 5: Per Capita Consumption at 1980 PPP Dollars and Percentage Change**

Country Classification	Number	1970-79	1980-84	1985-87	1980-87	Percent Change in Consumption	
						1980-84 to 1985-87	1970-79 to 1980-87
Low-income	29	373	421	441	427	4.8	14.5
Middle-income	43	1290	1541	1550	1545	0.6	19.8
AFRICA	29	350	345	322	336	-6.7	-4.0
EMENA	10	895	1142	1188	1159	4.0	29.5
ASIA	10	433	516	559	531	8.3	22.6
LAC	23	1785	2038	1988	2021	-2.5	13.2
IAL	24	1019	1101	1106	1103	0.4	8.2
PRE-1986	7	568	515	566	491	9.9	-13.6
POST-1985	14	484	565	585	566	3.5	16.9
NAL (TOTAL)	27	405	473	495	482	4.7	19.0
NAL+	16	387	449	481	461	7.1	19.1
NAL-	11	592	688	605	661	-12.1	11.7
All developing countries	72	570	646	671	652	3.9	14.4

As a group, adjusting countries are doing better than non-adjusting countries as ranked by growth in per capita consumption. On the one hand, this may be seen as a failure to adjust as reduction in absorption - of which private consumption is a major part - is one of the tools of adjustment policies. Yet, on the other hand, it would be hard to maintain that a priori, the poor are being hurt by the application of this tool. As mentioned earlier, intensely adjusting countries saw their relative position increase from 33.2 in 1980-84 to 44.3 in 1985-87, as compared to 31.2 and 21.6, respectively, for NAL- countries. Finally, thanks to growth in the seventies, overall levels of private consumption are considerably higher in the eighties than in the seventies, except for "pre-1986" countries which suffered a significant contraction in 1985-87. As can be seen from Table 1, a majority of those in the "pre-1986" category are low-income sub-Saharan African countries.

To what extent is this picture sketched by this aggregate welfare measure, per capita consumption, reflected in other, more direct measures of living conditions, such as infant and child mortality, nutritional well-being or access to education? Before this issue is examined, the paper will look at how the government expenditure on welfare programs has been affected during the recession. This is attempted in the next section.

### III. SOCIAL WELFARE EXPENDITURES

In most developing countries the public sector plays the dominant role in financing social welfare programs. The public sector grew rapidly in almost all countries in the seventies, but in the eighties, many developing countries were engaged in programs aimed at reducing fiscal imbalances that required a mixture of revenue expansion and expenditure reduction. Although stabilization and adjustment programs are not always explicit in specifying the focus for cuts in expenditure, it is generally believed that the social sectors suffer the most from these cuts. There is, therefore, growing concern that reducing government expenditures on social services, including health and education, may severely and adversely affect the most vulnerable population groups.

This section attempts to answer two sets of questions. The first is whether government expenditure as a proportion of GDP fell in the 1980s. If so, was the fall greater in adjusting countries than in non-adjusting countries? The second is whether there is substantial variation in the proportion of the total government expenditure allocated to health, education and other welfare programs. Have these ratios decreased or increased between 1980 and 1986? If so, are these changes different in adjusting and non-adjusting countries?

Government expenditure data were obtained from the International Monetary Fund's Government Finance Statistics. They contain only the Central Government's expenditures. Expenditure includes all non-repayable payments by government, whether required or non-required, and whether for current or capital purposes. Current expenditure includes, expenditure on goods and services, interest payments and subsidies, and other current transfers. Capital expenditure comprises the acquisition of fixed capital assets which will be used for productive purposes for more than one year.

The data is classified into four categories: 1) education services, 2) health services, 3) other welfare, 4) interest payments. The category "other welfare" includes expenditures on social security and welfare affairs and services; housing and community affairs and services; and recreational, cultural and religious affairs and services. Some of the services in "housing and community amenity affairs and services" might be more appropriately

classified as economics services. For example, water and sanitary services serve both homes and business. However, it is taken that the main thrust of such expenditures is to satisfy the needs of households.

Table 6 presents the government expenditures on education, health, other welfare and interest as a proportion of total expenditure in the first eleven columns for years 1975, 1980 and 1986. The last six columns give total expenditure as a proportion of GDP, where total expenditures are calculated without and with interest payments, respectively.

The table presents data for only 16 adjustment lending countries and 12 non-adjustment lending countries. It can be seen that the total government expenditure as a proportion of GDP has increased for IAL countries as a group between 1975 and 1986. This result holds even after deducting interest payments from the government budget in four of these countries. The ratio increased sharply for Mexico (14 percent to 29 percent), Costa Rica (19 percent to 27 percent), and decreased sharply for Tanzania (32 percent to 19 percent). On average Chile and Morocco had the highest, but also modestly declining, public expenditure/GDP ratio among the IAL countries for the period 1975-86.

On the average the share of total public spending on education and health as total government expenditure in IAL countries increased slightly from 20 percent in 1975 to 21 percent in 1980 and decreased to 17 percent in 1986. It is worthwhile noting that Korea sustained an upward trend in its percentage expenditures on health and education during the entire period of 1975-86, whereas Mexico, Tanzania, and Turkey had continuous declines in these percentages. The share of expenditures on other welfare programs in IAL countries as a group increased during the eighties. This was mainly due to large increases in Chile, Costa Rica, and Pakistan. Among the IAL countries in LAC, only Brazil's expenditures on other welfare programs as a proportion of the total expenditure declined in 1980-86 (from 34 percent to 24 percent).

Costa Rica is interesting, where both health and education expenditures have substantially declined between 1980 and 1986 whereas other welfare expenditures increased from 11 percent to about 30 percent. A large portion of this increase came about by increases in social security payments. This substantial reallocation of public welfare resources will certainly have implications which should be explored further. On the other hand, in Mexico,

all welfare expenditure ratios have substantially declined in the 1980-86 period: education from about 18 to 9, health from 2 to 1 and, other welfare from 19 to 10. These declines are accompanied by a large increase in the total central government outlay as a proportion of GDP, which is mainly attributed to interest payments. Interest payment as a share of GDP increased from 10 percent in 1980 to 51 percent in 1986.

On average, the increasing trend in public expenditure/GDP ratio also holds for "pre-1986" and "post-1985" countries. However for "pre-1986" countries the share of total expenditure on education, decreases from 1975 to 1980 and increases in 1986. A similar trend holds for health expenditures. The share of other welfare expenditures also decreases in the eighties. On the other hand, the share of total expenditures on education and health decreases for post-1985 countries, whereas the share of welfare expenditures increases slightly.

Because total government expenditure varies so much over time, ratios of welfare expenditure to total expenditure do not indicate whether per capita real welfare expenditures are increasing or decreasing over time. Table 7 was constructed by deflating nominal welfare expenditures by the consumer price index. To make cross country comparisons, we converted all expenditures to U.S. dollars by the 1980 purchasing power parity conversion rates. Thus, the figures in Table 7 are the per capita expenditures in 1980 U.S. dollars which are comparable over time as well as over countries.

This comparison of per capita welfare expenditure across countries will not reveal intra-sectoral peculiarities. For instance, in countries where school enrollments grow at much higher rates than the total population, any increase in per capita educational expenditure that might be observed may not capture a decline in per pupil expenditure that may actually have occurred. Similarly, average per capita expenditures in social sectors will not reveal intra-sector financing biases such as those in favor of higher education and preventative care that least benefit the poor.

Total per capita government expenditure in all groups of countries increased on the whole in real terms during the eighties. There are of course exceptions, most notably, Tanzania, Liberia and Dominican Republic with declines in per capita government expenditures in the eighties. Real expenditures on education and health decreased in IAL countries, whereas real

Table 6: Welfare Expenditure as Percentage of Total Expenditure and Expenditure as Percentage of GDP

Countries	Education			Health			Other Welfare		Interest Payment			Exp-Interest Payment/GDP			Total Expenditure/GDP		
	1975	1980	1986	1975	1980	1986	1980	1986	1975	1980	1986	1975	1980	1986	1975	1980	1986
<b>IAL Countries</b>																	
Brazil	6.5	3.4	3.0*	6.5	6.6	6.4*	33.6	23.9*	6.5	9.0	43.6*	17.1	18.1	14.0*	18.3	19.7	24.8*
Chile	12.1	14.5	12.5	7.0	7.4	6.0	38.0	43.2	10.1	2.8	5.7	30.8	27.2	28.2	34.3	28.0	30.0
Costa Rica	28.8	24.6	16.2	4.5	28.7	19.3	11.3	29.9	6.1	8.7	9.0	18.0	22.9	24.5	19.1	25.0	26.9
Korea	14.0	17.1	18.1	1.0	1.2	1.5	8.3	8.4	3.1	6.6	7.6	15.2	16.1	14.8	15.7	17.3	16.1
Mauritius	11.7	17.6	13.9	8.2	7.5	7.8	22.2	21.1	4.0	13.7	21.0	20.1	23.5	17.8	21.0	27.3	22.6
Mexico	18.2	17.9	9.1	4.2	2.4	1.3	19.4	9.8	8.4	10.0	50.8	12.6	15.1	14.1	13.7	16.8	28.7
Morocco	14.9	17.3	16.9	3.6	3.4	2.9	7.6	7.5	2.8	7.2	17.2	33.1	32.4	27.6	34.1	35.0	33.3
Pakistan	1.1	2.7	2.6	1.5	1.5	0.9	6.0	10.1	8.6	11.9	15.8	15.9	15.4	18.5	17.4	17.5	22.0
Tanzania	12.5	13.3	8.3*	7.0	6.0	5.7*	4.8	4.1*	3.6	6.8	10.2*	30.8	26.8	17.3*	32.0	28.7	19.2*
Thailand	20.1	19.8	19.5	3.7	4.1	6.1	5.5	5.2	8.4	7.8	15.8	13.4	17.4	17.0	14.5	18.9	20.2
Turkey	23.1	14.2	11.9	3.0	3.6	2.2	6.2	3.9	2.9	2.5	13.1	21.1	25.2	18.4	21.7	25.8	21.1
Average	14.8	14.8	12.0	4.6	6.6	5.5	14.8	15.2	6.4	7.9	19.1	20.7	21.8	19.3	22.0	23.6	24.1
<b>Pre-1986 Countries</b>																	
Burkina Faso	17.1	15.5	17.7*	6.6	5.8	6.2*	9.9	4.9*	5.3	--	10.2*	11.6	16.4	12.0*	12.2	16.4	13.3*
Zimbabwe	15.2*	15.5	20.3	6.9	5.4	6.1	8.3	6.8	6.4*	6.8	13.4	--	32.5	30.0	24.8*	34.8	34.7
Average	16.2	15.5	19.0	6.8	5.6	6.2	9.1	5.9	5.9	6.8	11.8	11.6	24.5	21.0	18.5	25.6	24.0
<b>Post-1985 Countries</b>																	
Hungary		1.8*	2.3		2.7*	3.6	24.3*	25.3	--	3.0*	3.5	--	54.5*	57.8		56.2*	59.9
Indonesia	8.9	8.3	9.8	2.0	2.5	2.1	2.8	2.4	10.3	12.5	17.2	19.1	21.3	20.0	19.4	22.1	22.5
Nepal	10.4	9.9	12.1*	5.9	3.9	5.0*	2.3	7.4*	--	--	--	9.0	14.3	18.6*	9.0	14.3	18.6*
Average	9.7	6.7	8.1	4.0	3.0	3.6	9.8	11.7	--	--	--	--	35.8	32.1	--	30.9	33.7
<b>NAL Countries</b>																	
Burma	13.5	10.6	11.7	6.6	5.3	6.6	11.4	11.6	--	--	--	12.7	15.9	16.7	12.7	15.9	16.7
Cameroon	15.7*	12.4	11.8	4.8*	5.1	3.4	11.2	12.9	1.1	0.6	3.8	16.7	14.1	20.2	16.8	14.1	21.0
Dominican Rep.	10.3	12.6	12.8*	6.8	9.3	9.0*	14.6	14.6*	1.0	5.8	4.7*	18.7	17.1	13.6*	18.9	18.2	14.3*
Egypt	9.0	8.6*	10.9	2.7	2.2*	2.3	22.6*	21.6	2.9	5.9*	8.9	54.2	42.9*	41.7	55.8	45.6*	45.8
India	2.3	1.9	2.0	2.4	1.6	1.9	4.3	6.0	10.3	12.5	17.2	11.3	11.6	14.7	12.6	13.3	17.7
Liberia	12.8	11.9	14.2	9.3	5.2	5.7	7.8	4.4	4.1	9.8	14.8	15.8	22.7	21.5	16.5	25.2	25.2
Oman	2.0	4.8	10.1	3.2	2.9	5.0	2.7	3.8	1.3	2.7	4.8	63.6	37.4	54.0	64.4	38.5	56.7
Paraguay	13.3	12.9	12.2	2.8	3.6	3.1	19.6	32.5	2.0	3.2	6.8	10.9	9.5	7.4	11.1	9.9	7.9
Sri Lanka	10.5	6.7	8.8	6.1	4.9	3.9	13.4	11.0	10.4	8.3	15.3	22.6	37.9	26.5	25.3	41.4	31.3
Syria	7.8	5.5	9.4	0.8	0.8	1.4	12.9	8.1	--	--	--	47.1	48.2	37.0	47.0	48.2	36.9
Venezuela	16.5	19.9	19.6	9.1	8.8	10.0	10.9	12.6	1.0	7.8	10.9	20.0	17.3	19.0	19.8	18.7	21.3
Yemen Arab Republic	5.4	12.6	21.7	2.7	4.0	4.5	3.4	2.6	0.5	0.5	1.3	16.8	31.7	25.1	16.9	31.9	25.4
Average	9.9	10.0	12.1	4.8	4.5	4.7	11.2	11.8	3.5	5.7	8.9	25.9	25.5	24.8	26.5	26.7	26.7

\* Denotes that the data is for the next year 1976 or 1981; or for the previous year, 1985 as the case may be.



expenditures on other welfare programs increased. The decline in health expenditures was larger than that in education. Real expenditures on education and health in pre-1986 countries increased slightly, but expenditures on other welfare programs decreased slightly. Interestingly, real expenditures increased for education, health and other welfare programs for post-1985 and NAL countries. As before, the averages mask large within group variations.

A recent study by the Pan American Health Organization (PAHO) that looked at the effect of the economic crisis of the eighties on public health expenditures also revealed the heterogeneity in health expenditure patterns in five LAC countries (Mexico, Honduras, Ecuador, Brazil and Uruguay). The study includes:

"... five national experiences confirms that there definitely was a crisis of resources for health at the central government level and that, in the typical case, the precrisis expenditure per capita had still not been regained in 1986. However, one cannot conclude from this that the health sector suffered discrimination on account of the crisis. It neither systematically suffered a reduction of its relative share of the reduced total product nor was it revealed as not having priority for the national governments."<sup>9</sup>

A recent study on the implications of macroeconomic adjustment on poverty in sub-Saharan Africa concludes (Sahn, 1989):

"No conclusive evidence was found to suggest that countries reduce government expenditures, either in real terms or as a percentage of GDP, as a consequence of receiving adjustment loans. In those countries where there has been a compression in government spending in the 1980s, it generally pre-dated the beginning of the adjustment process."<sup>10</sup>

Thus, the trends do not show an overall reduction of government expenditures as a percentage of GDP, nor is there a discernible pattern related to adjustment status. Again, this could be seen as an apparent failure to adjust, that is, lack of economic growth. Though social sector expenditures as a percentage of total expenditure show, on average, relatively stable patterns, the within country-group variation is large. Expenditures on health and education have increased in non-adjusting countries. Most of the

Table 7: Per Capita Welfare Expenditures in 1980 PPP Dollars

Countries	Total Expenditure		Education		Health		Other Welfare	
	1980	1986	1980	1986	1980	1986	1980	1986
<b>IAL Countries</b>								
Brazil	661.1	858.1	22.5	25.7	43.6	54.9	222.1	205.1
Chile	1196.0	1200.3	173.4	154.8	88.5	72.0	454.4	518.5
Costa Rica	757.8	755.1	186.4	122.3	217.5	145.7	85.6	225.8
Korea	409.8	563.5	70.1	102.0	4.9	8.5	34.0	47.3
Mauritius	403.6	433.2	71.0	60.2	30.3	33.8	89.6	91.4
Mexico	727.9	1154.6	130.3	105.1	17.5	15.0	141.2	113.2
Morocco	419.7	414.9	72.6	70.1	14.3	12.0	31.9	31.1
Pakistan	173.1	265.5	4.7	6.9	2.6	2.4	10.4	26.9
Tanzania	101.3	59.3	13.5	4.9	6.1	3.4	4.9	2.4
Thailand	320.2	417.3	63.4	81.4	13.1	25.5	17.6	21.7
Turkey	598.3	604.9	85.0	72.0	21.5	13.3	37.1	23.6
Average	524.5	611.6	81.2	73.2	41.8	35.2	102.7	118.9
<b>Pre-1986 Countries</b>								
Burkina Faso	58.7	76.7	9.1	14.6	3.4	4.5	5.8	3.8
Zimbabwe	323.6	323.1	50.2	65.6	17.5	19.7	26.9	22.0
Average	191.1	200.0	29.7	40.1	10.5	12.1	16.4	12.9
<b>Post-1985 Countries</b>								
Hungary		3513.2	55.7	80.8	83.6	126.5	752.2	888.8
Indonesia	234.9	269.6	19.5	26.4	5.9	4.0	6.6	6.5
Nepal	70.1	104.5	6.9	12.6	2.7	5.2	1.6	7.7
Average	--	--	27.4	39.9	30.7	45.2	253.5	301.0
<b>NAL Countries</b>								
Burma	76.3	91.7	7.7	10.7	4.0	6.1	9.7	10.6
Cameroon	123.4	243.5	15.3	28.7	6.3	8.3	13.8	31.4
Dominican Rep.	340.0	248.9	42.8	31.9	31.6	22.4	49.6	36.3
Egypt	453.7	550.5	39.0	60.0	10.0	12.7	102.5	118.9
India	81.7	132.9	1.6	2.7	1.3	2.5	3.5	8.0
Liberia	171.4	126.3	20.4	17.9	8.9	7.2	13.4	5.6
Oman	2390.0	5544.1	114.7	560.0	69.3	277.2	64.5	210.7
Paraguay	193.9	142.0	25.0	17.3	7.0	4.4	38.0	46.2
Sri Lanka	496.4	464.5	33.3	40.9	24.3	18.1	66.5	51.1
Syria	1044.0	1035.0	81.4	97.3	11.8	14.5	190.9	83.8
Venezuela	827.3	799.8	164.6	156.8	72.8	80.0	90.2	100.8
Yemen Arab Republic	305.3	301.2	38.5	65.4	12.2	13.6	10.4	7.8
Average	578.4	806.7	48.7	90.8	21.7	38.9	54.3	59.2

IAL countries in the table show a decline in per capita expenditures for health and education. A few (Chile, Costa Rica, and Pakistan) show an increase in other welfare expenditures. The declines in per capita health and education expenditures are cause for concern, especially for those countries that, by any account, need significant improvements in their social sector infrastructure. In Brazil and Mexico these declines took place against the background of a growing government sector, relative to GDP. Greater emphasis needs to be given to the protection of the social sectors during the course of adjustment to avoid a further slideback. Because providing health and education services is an investment in human capital, such greater emphasis can be fully comparable with adjustment policies that aim at long-term sustainable growth.

#### IV. INFANT AND CHILD MORTALITY, AND IMMUNIZATION

Life expectancy is perhaps the single most comprehensive indicator of a population's health status. It is the result of a large number of inputs that affect longevity in a complex and, as yet, poorly understood way. Many of these inputs (for example, adult literacy) are by their very nature resilient against fluctuations in living conditions in the short run. Other inputs, however, may be more dependent on current economic conditions (for example, funds for immunization programs). If infant and child mortality are more dependent on the availability of such inputs than adult mortality - which is plausible - the former indices may be more sensitive to economic fluctuations than the latter.

Infant mortality is defined as the number of infants per thousand live births in a given year who die before reaching their first birthday. Hicks and Streeten (1979) cite infant mortality as "a good indicator of the availability of sanitation and clean water facilities because of the susceptibility of infants of water-borne diseases"<sup>11</sup>. The infant mortality rate is also very sensitive to the nutritional status of the population. Bardhan (1974) states that "maternal malnutrition often leads to the birth of premature, underweight babies; also poor nutrition reduces resistance to infection, particularly among children, and the various infections in turn reduce the nutrient absorption capacity of the body".<sup>12</sup> The aggregate values of the infant mortality rates show that the infant mortality rate has declined monotonically during the 1972-87 period (Table 8).

Some demographers prefer to use the child mortality rate rather than the infant mortality rate as a measure of a country's living conditions. The child mortality rate is the number of children per 1000 live births who die before the age of five. Differences among countries in weaning practices (longer/shorter than 12 months) put newborns at risk at different times in their life. The infant mortality rate will reflect these differences, the child mortality rate may be more robust.

A more serious problem with the above analyses of trends in mortality rates is the quality of the data used. To allow for a systematic comparison of a large number of countries over a large period of time, we had to use data that are a combination of true information and results from various

**Table 8: Infant Mortality  
Percentage Decline**

Country Grouping	Number of Countries	1972-77	1977-82	1982-87
IAL	23	15.0	12.7	12.6
PRE-1986	10	8.2	9.9	9.3
POST-1985	17	7.6	9.0	17.3
NAL (TOTAL)	29	8.8	13.0	11.2
NAL+	15	8.3	13.6	11.1
NAL-	14	12.0	9.2	11.5
All Developing Countries	79	10.6	12.2	12.6
Actual Decline in Rate	79	119-108	108-97	97-86

demographic models or other inter- and extrapolations. The published data do not permit a separation of the true observations and the imputations, which greatly hampers analyses of this kind.

Hill and Pebley (1989)<sup>13</sup> took a careful look at the U.N. child mortality data and eliminated "fillers" and other data of dubious quality. We grouped the Hill and Pebley data into the various categories (IAL, NAL, etc.), using only countries for which at least the change in child mortality from 1975-80 to 1980-85 could be calculated. That left only 22 countries (see Table 9). Of the 8 IAL countries in this group, 4 show a faster pace of improvement in the eighties than in the seventies. The Philippines, Costa Rica and Mexico continue to show a reduction of child mortality in the eighties, but the pace of progress is less than in the seventies. Ghana is the only country that shows an increase in child mortality. Ghana's deep recession, coupled with two consecutive years of severe drought resulted in a sharp drop in food production, an increase in food prices and rising malnutrition. (Alderman, 1989; United Nations, 1989).<sup>14</sup> The situation was worse in 1983-84.

Table 9: Percentage Decline in Child Mortality

Country	1960-65 to 1965-70	1965-70 to 1970-75	1970-75 to 1975-80	1975-80 to 1980-85	level 1980-85
<b>ALS Countries</b>					
Brazil	8.6	10.7	16.8	19.6	86
Chile	17.6	29.5	34.2	46.2	28
Colombia	11.9	25.2	28.1	34.4	42
Costa Rica	21.4	27.3	45.3	37.7	24
Ghana	10.1	11.2	13.8	-6.7	160
Mexico	11.0	11.5	13.0	11.5	77
Philippines	10.9	11.4	11.9	6.7	83
Senegal	0.0	2.5	12.0	13.2	210
<b>"Pre-1986" Countries</b>					
Panama	15.5	17.1	30.9	21.3	37
Uruguay	-1.9	3.7	5.8	30.6	34
<b>Post-1985 Countries</b>					
Argentina	5.6	14.7	17.2	12.5	42
Bangladesh		0.0	3.1	2.7	215
Mali			7.1	9.9	272
<b>NAL Countries</b>					
Dominican Republic			25.8	10.2	88
Egypt		14.3	18.3	15.3	166
Haiti			10.8	8.7	189
India			8.7	16.1	167
Liberia	5.1	1.4	11.6	9.5	220
Malaysia	20.9	13.9	25.8	10.9	41
Peru	11.0	18.0	7.6	23.8	112
Sri Lanka	13.9	9.2	16.5	39.4	40
Trinidad & Tobago	5.7	26.0	13.5	12.5	28

Source: Hill and Pebley (1989), (unpublished).

Thereafter, food prices continued to climb, but so did food production. Malnutrition decreased significantly. The bad nutritional situation in the early eighties is probably responsible for the rise of child mortality in Ghana during this period. Of the 9 NAL countries in the sample 6 saw a reduction in the pace of improvement during the eighties. Peru, India and Sri Lanka did better in the eighties than in the seventies.

Generalizations on the basis of this sample are difficult to make. The continuing progress during the eighties is perhaps the most striking result. The increasing speed of progress in 9 out of the 22 countries is also noteworthy. The apparent lack of a relationship between adjustment policies and trends in child mortality is the third important result.

Perhaps the most important observations are at the individual country level. For instance, the pace of progress seems to have slowed in Costa Rica, but child mortality is already very low (24/1000). The same cannot be said for Bangladesh, where progress is slow; slowing down and badly needed. In general progress is slow in countries that have high initial mortality levels (Bangladesh, Haiti, Liberia, Mali, Senegal).

Finally, the newest, and probably the most reliable data in this area is provided by the Demographic and Health Surveys, (DHS).<sup>15</sup> Table 10 shows infant mortality rates as calculated by the DHS, for selected countries. Two observations stand out. First, the levels are generally much lower than those published in the World Development Report, suggesting that progress may actually have been faster than indicated by the WDR data. Second, for all countries listed in the table the decline in infant mortality appears to be very large and continues during the eighties.

Thus, if living conditions in some developing countries have decreased during the eighties up to the point that the life of the newborn is being threatened, this is not reflected in the data. Neither does there seem to be a link between progress against child mortality, nor lack thereof, and adjustment policies.

The apparent lack of a relationship between infant and child mortality is not a new result. It is consistent with the historical evidence on pre-industrialized England. And the more recent experience of improving mortality indicators during Chile's severe recession of the seventies is another example. This is not to say that there is no reason for concern. The excess

mortality of newborns, as reflected in infant mortality rates of well above 100 in most low-income countries, is appalling given existing technologies that are both affordable and easy to implement (for example, immunization, oral rehydration). Indeed it is the steady progress in the use of these techniques that lies behind the observed achievements. A recent press release of the World Health Organization on the Expanded Programme of Immunization (EPI) reports:

"For the first time in history, immunization coverage for the world has reached the two-third mark (67 percent) for a third dose of polio vaccine for children reaching their first year of life. Other good news is contained in the global immunization figures...: third dose coverage of diphtheria, pertussis and tetanus (DPT) stands at 66 percent, coverage for the vaccine used against tuberculosis (BCG) has reached 71 percent and measles vaccine coverage is 61 percent."<sup>16</sup>

Table 10: Infant Mortality Rates: DHS and World Bank Data

	1971-75		1981-86	
	DHS	WB	DHS	WB
Burundi	100	132	75	115
Liberia	192	112	144	89
Mali	170	196	108	133
Senegal	120	157	86	124
Sri Lanka	40	37	25	29
Thailand	55	60	35	51
Morocco	104	115	73	93
Dominican Republic	80	88	68	51
Ecuador	97	87	58	50
Guatemala	92	87	73	66
Trinidad & Tobago	47	28	26	29

Note: 1971-75 refers to 1975 for the World Bank. 1981-86 refers to any year between 1981 and 1986 for the World Bank. For DHS, 1971-75 sometimes covers 1972-76 or 1972-77.



WHO warned that it is going to take a great effort to sustain these achievements and improve them. Indeed, as seen in Table 11, while most countries increased their immunization coverage in the eighties (for measles and polio), there are countries in every grouping that saw their progress eroded.

There are still many countries, where the coverage is very low (Bangladesh, Bolivia, Ethiopia, Guatemala, Haiti, Indonesia, Nepal, Somalia, Sudan, Syria and Yemen AR). At the same time, though, there are countries that show significant improvement, despite severe economic setbacks (Jamaica, Mexico, and the Philippines).

What does emerge from these data is that the general positive correlation between economic development (as measured by growth in GNP per capita) and social progress (as indicated by reduction in child mortality) does not hold for periods of recession. Short of major disasters, such as famines and wars, mortality data can probably only be affected in the long run, by large time lags in the underlying chain of causal events. Furthermore, the increased availability of affordable, low-technology, life saving interventions, permits increased progress even in times of recession.

The next two sections focus on two other aspects of living conditions that are more responsive to economic fluctuations: food security and education. As a proxy for food security, we will look at trends in food production, protein intake, and caloric intake as a ratio of caloric requirement.

Table 11: Immunization Coverage

Country	Measles								Polio							
	1980	1981	1982	1983	1984	1985	1986	1987	1980	1981	1982	1983	1984	1985	1986	1987
<u>IAL Countries</u>																
Brazil	56	73	68	67	80	63	55	55	99	99	99	99	89	86	89	90
Bolivia	13	17	15	13	20	21	17	33	14	15	15	10	57	30	31	28
Chile	87	93	95	92	100	92	91	92	77	96	100	94	96	89	86	95
Colombia	13	26	27	43	49	53	56	59	16	22	27	44	60	62	65	82
Costa Rica	60	71	69	82	76	81	55	90	86	85	78	84	81	75	94	89
Jamaica			12	15	60	64	36	62	34	37	68	57	56	58	74	82
Malawi		65	58	67	56	51	66	53		68	36	67	59	46	56	50
Mauritius			34	53	44	61	75		87	82	94	89	83	85	84	
Mexico	35	33	37	23	21	64	60	54	91	85	85	88	91	67	96	97
Pakistan	1	2	3	19	33	23	41	53	2	3	5	15	44	30	56	62
Philippines			22	30	47	55	53	68	43	44	50	58	54	61	55	73
Tanzania	84	76	62	69	53	76		88	57	49	49	38	48	65		
<u>Pre-1986 Countries</u>																
Ecuador	24	31	44	34	54	54	49	46	19	19	36	32	36	39	43	51
Guyana			68	44	56	40	42	52	42	37	73	59	41	77	67	77
Panama	47	53	64	60	65	83	73	78	45	50	61	60	70	71	71	74
Sudan		1	1	2	3	6	11	22	1	1	2	3	4	8	14	29
Uruguay	50	95	52	65	66	59	82	99	59	58	72	77	83	58	83	70
<u>Post-1986 Countries</u>																
Argentina	58	73	95	69	66	67	87	81	91	38	94	73	64	69	85	
Bangladesh		3	1	1	1	1	3	6	1	4	1	1	1	2	4	8
Honduras	35	38	55	49	44	53	60	57	31	37	53	51	84	58	63	61
Hungary	99	99	99	99	99	99	99	99	98	98	99	98	98	99	99	99
Indonesia			0	2	7	16	47	46		2	1	4	7	14	46	45
Nepal		2	2	11	24	46	66			1	3	4	6	20	34	40
Somalia	9	2	4	6	16	34	25	29	8	2	4	5	10	22	17	25
Tunisia	65	65	43		55	59	67	79	37	37	52		61	69	72	89
<u>NAL Countries</u>																
Botswana	63	68	68	76	71	68	62			71	49	69	67	67	60	
Dominican Republic	29	17	24	23	19	24		71	46	42	37	22	99	11		79
Egypt	78	65	69			74	78	86	84	84	81			95	79	81
El Salvador	45	44	43	46	41	71	51	48	42	38	42	20	44	54	70	57
Ethiopia	7		16	13	12	10	13			6		9	6	6	6	
Guatemala	23	8	12	9	24	23	47	24	42	42	45	43	47	21	36	18
Haiti					8	21		23	8	3	7	6	12	19		28
India		1				1	17		3	7	12	18	28	35	45	50
Jordan	29	40	48	46	30	39	81	87	32	87	84	77	41	54	88	89
Malaysia			11	23	20	20	63		74	64	61	53	89	87	62	72
Mozambique	32	58	51	50	39					32	43	38	32	25		
Nicaragua	15	20	40	38	42	49	61	44	21	52	50	75	73	70	89	85
Sri Lanka				3	20	47	60		48	49	57	66	65	65	77	78
Syria	13	14	14	18	20	30	63	31	13	14	14	20	22	26	86	36
Venezuela	50	43	45	42	41	56	48	57	95	75	76	77	59	59	67	64
Yemen AR	2	3	4	5	7	11	13	15	1	2	3	4	6	10	11	14

SOURCE: World Health Organization, September 1989.

## V. FOOD PRODUCTION, UNDERNUTRITION AND PROTEIN INTAKE

This section looks at changes in per capita food production in adjusting and non-adjusting countries. The livelihood of a large proportion of the population in developing countries depends on the amount of food they produce and consume. Changes in per capita food production therefore will be an important indicator of the changes in real income of the people and their entitlement to food.

There are two major data sources on food production at the global level: the Food and Agricultural Organization of the United Nations (FAO), and the United States Department of Agriculture (USDA). There are significant differences in the coverage and collection of these data which give rise to major differences in estimates of the output of several crops, particularly wheat and rice (see Paulino and Tseng, 1980).<sup>17</sup> The question arises as to which of the two data sets is better. This question cannot be answered without a thorough evaluation of the two data sources for each country. This exercise is beyond the scope of the present study. The empirical results here are derived from the World Bank's Andrex File which are from the FAO data source. Quantities of food are measured net of animal feed, seeds for use in agriculture, and food lost in processing and distribution.

Table 12 presents the countries which had negative growth rates in per capita food production during the 1981-87 period. The results show that the per capita food production declined in most of the developing countries between 1981 and 1987. The number of countries with negative per capita food production varies widely between years. Of the 88 developing countries studied, 42 had negative growth in per capita food production in 1981 but this number increased to 65 in 1987. These figures present a very depressing picture of the food production in the world. However, if we look at Table 13, the situation does not appear to be as grim. The figures in this table are the weighted average of the per capita food production indices of various country groupings, the weight being proportionate to the country's population. The index is set equal to 100 in 1980. For the 87 developing countries as a whole, the per capita food production index increased gradually to 114 in 1986 and then dropped to 110 in 1987. Most of this improvement is attributed to the performance of low-income Asian countries. The African countries suffered

Table 12: Number of Countries with Negative Growth Rates of Per Capita Food Production

Country Groups	Number of Countries	Years						
		1981	1982	1983	1984	1985	1986	1987
<u>Low-income</u>	40	19	23	23	28	15	19	33
AFRICA	30	15	17	22	21	10	12	26
ASIA	8	2	4	1	5	3	5	6
EMENA	1	1	1	0	1	1	1	1
LAC	1	1	1	0	1	1	1	1
<u>Middle-income</u>	48	23	25	34	22	20	25	32
AFRICA	8	1	5	7	5	2	4	6
ASIA	4	1	2	3	1	0	3	3
EMENA	14	11	4	10	6	3	5	8
LAC	22	10	14	14	10	15	13	15
IAL	25	11	14	19	11	11	12	20
PRE-1986	11	1	6	7	7	3	5	9
POST 1985	19	8	8	12	13	8	7	15
NAL (TOTAL)	33	22	20	19	19	13	20	21
NAL+	18	10	9	10	7	4	12	11
NAL-	15	12	11	9	12	9	8	10
All Developing Countries	88	42	48	57	50	35	44	65

Table 13: Per Capita Food Production Index

Country Groups	Number of Countries	Years							
		1980	1981	1982	1983	1984	1985	1986	1987
<u>Low-income</u>	40	100	103	105	111	114	115	118	113
AFRICA	30	100	100	100	96	92	99	101	95
ASIA	8	100	103	106	114	117	117	121	116
EMENA	1	100	99	91	92	90	89	89	86
LAC	1	100	98	96	98	98	98	96	97
<u>Middle-income</u>	47	100	101	102	98	100	102	101	100
AFRICA	8	100	111	98	84	99	97	96	91
ASIA	4	100	103	102	101	103	104	102	99
EMENA	13	100	97	102	99	100	102	106	103
LAC	22	100	101	102	98	100	101	98	100
IAL	25	100	101	101	98	99	102	107	100
PRE-1986	11	100	108	105	100	93	107	110	99
POST-1985	19	100	102	108	113	119	119	134	124
NAL (TOTAL)	32	100	104	102	108	108	109	109	101
NAL+	17	100	104	103	112	112	113	112	103
NAL-	15	100	100	96	90	88	90	93	89
All Developing Countries	87	100	102	104	108	110	111	114	110

a loss in per capita food production especially during 1983-84. Latin American countries have barely kept their food production in line with their population increase.

Intensely adjusting countries show improvement in per capita food production in 1985 and 1986, but most of that disappears in 1987. We observe a similar pattern for pre-1986 countries. In post-1985 per capita food production is 24 percent higher in 1987 than in 1980. The results for non-adjusting countries mimic those of their economic performance: growth in NAL+ countries and deterioration in NAL- countries. Both groups experienced a significant reduction in food production in 1987.

Why do the conclusions emerging from Tables 12 and 13 differ so much? The main reason is that Table 13 gives only the averages, hiding completely the variations in the performance of individual countries. The per capita growth rates seem to vary widely over time as well as over countries. The drop in per capita food production in a large number of countries is offset by the large increases in per capita food production in fewer countries. The section below examines to what extent these food production trends have resulted in better or worse nutrition outcome measures such as undernutrition and child malnutrition.

### Undernutrition

In the FAO's Third World Food Survey "undernutrition is defined in terms of inadequacy of diet, that is, in calorie intake which, continued over a long period, results in either loss of normal body weight or reduction in physical activity or both". This definition is not strictly appropriate for children because allowance must be made for their satisfactory growth and the high degree of activity characteristics of healthy children (Sukhatme, 1961). Malnutrition on the other hand is a broader term defined in terms of the deficiency in diet of one or more essential nutrients. Undernutrition is primarily due to inadequate intake of calories, whereas malnutrition is also caused by inadequacy of particular (or several) essential nutrients.

One of the major problems involved in estimating the extent of undernutrition in a population is the identification of undernourished persons. The FAO has been concerned with the issue of determining the dietary energy requirement of individuals in different age and sex groups that will

allow them to maintain the specified physical efficiency. FAO periodically publishes the average calorie requirement norms for a reference man or woman for different countries. Some attempts have been made to measure undernutrition using these norms. This approach, which classifies a person as undernourished if his or her calorie intake is below the required norm, was followed by the World Bank and FAO to estimate the extent of undernutrition at the global level. (Reutlinger and Selowsky, 1976; and FAO, 1977).<sup>18</sup>

The World Bank estimates of global undernutrition suggest that approximately 1,100 million people, or 74 percent of the total population of the developing countries, consume less than the requirement norms recommended by the FAO. Thus, according to these estimates undernourishment in the developing world is distressingly high and immediate action is needed to remedy the situation. The calorie norm approach which forms the basis for the World Bank estimates assumes that all individuals have the same requirements. However, the energy requirement can vary not only across individuals but also within individuals during different periods. (see Sukhatme, 1981, 1981a, 1982; and Srinivasan, 1981).<sup>19</sup>

Calorie norms can be usefully employed to assess the changes in the degree of undernourishment at an aggregate level. To determine undernourishment at the aggregate level we compare the average per capita calorie intake with the per capita caloric requirement. (Both variables are available in ANDREX.) We use the ratio of the shortfall (or surplus) to requirement as an "undernutrition index" to compare changes in nutritional status during the eighties. The values of the undernutrition index for the period 1980-86 are presented in Table 14.

Interpreting the data in Table 14, it is important to bear in mind the following points. First, even if the average per capita calorie intake of a country is exactly equal to its per capita requirement, undernutrition can still exist for some of the population due to maldistribution of calorie intake. At the United Nations Food Conference in Rome in 1974, it was considered that energy supplies in the developing regions should be at least 10 percent above aggregate requirements to allow for maldistribution. The figure of 10 percent was arrived at on an ad hoc basis. This figure should vary from country to country depending on the degree of maldistribution of

Table 14: Undernutrition

Country Groups		Number of Countries	Years					
			1980	1981	1982	1983	1984	1985
<u>Low-income</u>	39	-3.91	-1.50	-0.28	1.93	2.88	2.76	4.23
AFRICA	29	-8.15	-8.14	-9.69	-12.43	-14.09	-11.09	-10.48
ASIA	8	-3.22	-0.41	1.27	4.30	5.72	5.12	6.77
EMENA	1	-4.42	-5.77	-6.51	-5.91	-3.44	-1.74	-4.63
LAC	1	-16.48	-16.59	-15.97	-15.77	-16.00	-15.65	-15.84
<u>Middle-income</u>	47	15.17	15.27	15.53	15.12	15.77	16.54	17.11
AFRICA	8	8.94	10.02	9.55	8.05	9.09	8.86	8.52
ASIA	4	9.56	8.31	8.65	7.75	9.75	10.75	11.26
EMENA	13	24.07	24.49	24.91	25.25	25.02	26.55	28.10
LAC	22	12.45	12.76	13.02	12.52	13.15	13.49	13.59
IAL	24	7.81	8.13	8.17	6.31	6.44	7.96	8.44
Pre-1986	11	7.36	7.85	5.75	4.39	-1.51	3.95	4.90
Post-1985	19	0.51	1.31	4.73	7.26	8.87	8.99	9.65
IAL (TOTAL)	32	-2.54	0.42	-0.83	2.01	3.07	1.81	4.31
IAL+	17	-2.68	0.93	-0.60	2.68	4.08	2.71	5.39
IAL-	15	-1.66	-1.44	-2.23	-2.00	-2.90	-3.46	-1.89
All Developing Countries	86	0.83	2.67	3.66	5.22	6.11	6.22	7.46



calorie intake. For instance, the calculations performed on Indian data by Kakwani (1987) suggest that the average energy supply for the rural areas should be about 20.6 percent above the average energy requirement and the corresponding figure for urban areas was found to be 11 percent.

Second, the procedure used assumes that the distribution of calorie intake has not changed during the recessionary period. In a situation of declining food availability, the poor are generally the first to lose their entitlement to food. The distribution of calorie intake is likely to become worse during periods of food shortages. Clearly, the actual increase in the degree of undernutrition will be greater than is shown by the magnitude of the "undernutrition index." In a country where the index is lower than -15, the population of that country can be regarded as suffering acute undernutrition.

The average per capita calorie intake is calculated by dividing the calorie equivalent of the food supplies in an economy by the population level. Food supplies comprise domestic production, imports less exports and changes in stocks; they exclude animal feed, seeds for use in agriculture, and food lost in processing and distribution. The daily calorie requirement per capita refers to the calories needed to sustain a healthy person at normal levels of activity, taking into account age and sex, average body weight, and environmental temperatures.

Undernourishment is widely prevalent in Africa (Table 14). The average "undernutrition index" is negative in 23 out of the 37 African countries. This means that even if food were evenly distributed according to requirements, a large proportion of the population would still remain undernourished. Undernourishment is particularly severe in Ethiopia, Ghana, Guinea, Mozambique, Rwanda, Sierra Leone, and Chad. The "undernutrition index" for these countries exceeds -15, indicating extremely distressing situations.

In about one-third of the African countries, the degree of undernutrition has worsened between 1980 and 1986. In 1980, 22 low-income African countries had negative undernutrition indices. This number increased to 26 in 1984 and then it declined to 21 in 1986. Despite the improvement in 1985 and 1986, undernutrition at the end of the period exceeds that in 1980.

Fortunately the food situation in other parts of the world is not as grim as that in Africa. Although large scale undernutrition exists in many

other countries, particularly those in South Asia, there is a general trend towards improvement in their nutritional situation. With the exception of the Yeman People's Democratic and the Yeman Arab Republic, all countries in EMENA have a very low degree of undernutrition. India and China, the two largest countries in Asia, have significantly reduced the extent of their undernutrition during the 1980s. Bangladesh still remains a country with a high degree of undernutrition. Papua New Guinea, although being a middle income country, also has a severe degree of undernutrition.

Most countries in Latin America have a low degree of undernutrition. The undernutrition index was negative for 7 out of 23 countries. Haiti, Bolivia and Peru have the most severe undernutrition, despite a slight improvement towards the end of the period. Change in the degree of undernutrition is generally small in Latin America compared to other regions.

Among the intensive adjusting countries, the degree of undernutrition seems to have increased slightly between 1980 and 1983 and decreased between 1983 and 1986. Although, a similar pattern is followed by the "pre-1986" countries, the value of undernutrition index for them in 1986 remained higher than in 1980. "Post-1985" countries experienced a steady improvement in the degree of undernutrition between 1980 and 1986.

NAL+ countries also experienced improvement in nutrition status during the eighties, but the situation for NAL- countries remains grim and may actually be worse in 1986 than in 1980.

### Protein Intake

In this section we look at the variations in protein intake which are also an important determinant of the nutritional status of a population. We have not attempted to construct an index of protein deficiency because of notoriously unreliable estimates of protein requirement figures for different countries. Thus, the objective here is limited to seeing whether the per capita protein consumption in different countries has increased or decreased during the recessionary period of the 1980s. Table 15 presents weighted averages of per capita protein intake for various country classifications; the weights being proportional to population. The figures indicate an overall improvement in protein consumption in 86 developing countries between 1980 and 1986.

It is worth noting that these grouped data mask large differences in protein intake among countries. For instance, in Greece the average per capita protein consumption for the 1980-86 period is 111.6 grams whereas the figure for Mozambique is only 29.5 grams. Other countries which have very low protein consumption are Bangladesh (40.1), Central African Republic (43.4), Ghana (37.8), Guinea (40.7), Haiti (44.9), Liberia (43.3), Sierra Leone (42.0), and Zaire (34.3).

The intense adjusting countries show a slight improvement in per capita protein consumption between 1980 and 1986. For the "pre-1986" countries, the protein consumption declined until 1984 and then increased in 1985 and 1986. Among the non-adjusting countries, per capita protein consumption in NAL+ countries increased continuously during 1980-86. Thus, per capita protein consumption depicts the same pattern as the undernutrition index discussed above. During the period of falling incomes, it is probable that many poor households would consume more inferior foods. Such food items contain less protein but more calories. Therefore, the ratio of protein to calories consumed may provide a good indicator of the people's changing living standards. The average of this ratio for various country classifications shows a remarkably stable value over time, indicating a very close relationship between calorie and protein intakes. These results suggest that the consumption pattern of countries at the aggregated level has not changed much during the 1980-86 period.

Table 15: Per Capita Protein Intake

Country Groups	Number of Countries	Years						
		1980	1981	1982	1983	1984	1985	1986
<u>Low-income</u>	39	52.2	53.4	54.1	55.4	55.9	56.2	57.4
AFRICA	30	53.1	53.0	52.0	50.7	49.2	51.1	52.9
ASIA	8	52.1	53.5	54.5	56.2	57.0	57.0	58.3
EMENA	1	67.5	67.0	67.4	67.8	71.3	73.8	72.2
LAC	1	44.7	44.1	44.8	44.7	45.3	45.6	45.3
<u>Middle-income</u>	47	71.7	72.3	71.8	71.4	71.6	72.2	72.6
AFRICA	8	65.4	66.1	65.6	63.7	63.9	62.9	62.0
ASIA	4	57.2	57.9	58.1	58.0	58.8	58.3	59.3
EMENA	14	87.4	88.0	86.9	87.1	86.6	88.5	89.5
LAC	12	68.2	68.6	68.3	67.8	68.2	68.6	68.9
IAL	24	62.3	62.7	62.6	61.9	61.2	62.2	62.9
Pre-1986	11	70.4	70.3	69.3	68.5	65.7	68.3	68.6
Post-1985	19	54.5	55.6	56.9	58.0	59.3	60.0	60.5
HAL (TOTAL)	32	55.8	57.4	57.1	58.7	59.1	58.5	60.3
HAL+	17	54.6	56.3	56.0	58.1	58.6	57.9	60.0
HAL-	15	63.2	63.5	63.3	62.5	62.0	61.9	62.4
All Developing Countries	86	57.1	58.1	58.5	59.4	59.8	60.2	61.2

In summary, while the food production data show, in the aggregate, some modest improvement of per capita production over time, the undernutrition results clearly indicate that this progress is insufficient. Moreover, an increasing number of countries show a decline in per capita food production. In Africa, the number of countries with negative growth rates in per capita food production increased from 15 in 1981 to 26 in 1987. This decline is cause for great concern in those countries where malnutrition is already a severe problem. Undernutrition increased in one third of the African countries, that is, in a region where malnutrition was already widespread. Protein intake shows generally some modest improvements, while the protein/calorie intake ratio appears essentially flat in all country groupings.

The average patterns for adjusting countries are essentially the same as for non-adjusting countries. A look at the individual country data does not reveal a clear pattern. For instance, in 9 out of 11 IAL countries in Africa, the undernutrition index went up between 1980 and 1983-84.<sup>1</sup> In 9 out of 11 it went down between 1983-84 and 1986. Despite this reversal 7 IAL countries showed more undernutrition in 1986 than in 1980.

The 9 NAL countries in Africa look very much the same: deterioration in 6 countries between 1980 and 1983-84; improvement in 6 countries after 1983-84; but the situation in 1986 was worse than in 1980 in 6 out of 9 NAL countries.

The few countries that managed to gradually reduce undernutrition during the 1980-86 period are unlikely role models. Mauritania (IAL), saw its undernutrition index improve from -10.6 in 1980, to -2.7 in 1984, to 0.5 in 1986. Botswana (NAL), despite 6 consecutive years of drought saw improvements from -7.2 to -6.4 to -5.1, respectively. Adequate food relief efforts are behind these achievements. Kenya (IAL), Malawi (IAL), Rwanda (NAL) and Mozambique (NAL) saw a continued deterioration in their nutritional status. On the average, Ethiopia (NAL) has the highest level of undernutrition during the period 1980-86.

---

<sup>1</sup> There are no data for the 12th ALS African country: Zambia.

It could be argued that undernutrition as here defined is not an adequate index of the nutritional status of the population. Direct anthropometric measures such as height for age, or weight for height, would be preferable. Unfortunately, such data are only available for a limited number of countries. The United Nations recently published an Update on the Nutrition situation, containing information on 33 countries (United Nations, 1989).<sup>20</sup> This report is a follow-up of the First Report on the World Nutrition Situation (United Nations, 1987). The latter summarizes its results as:

"In most parts of the world, nutrition has improved over the last 25 years...However, Sub-Saharan Africa has suffered long-term declining food availability and increased malnutrition..."<sup>21</sup>

The Update concludes that, by and large, the long-term trend in child nutrition is one of gradual improvements. But the report also shows that child nutrition can be very sensitive to the disruptive effects of crises (severe economic recession, political upheaval, drought).

For instance, in Ghana malnutrition increased during the early eighties and improved thereafter. Benin and Togo show a similar pattern. The Philippines showed little improvement over the last decade and possible deterioration in 1985. The long-term negative trend in child nutrition in Nicaragua appears to continue (United Nations, 1989). It seems that the results from the undernutrition data presented in Table 14 are consistent with the results based on anthropometric data (at least for the few countries for which there are data).

What is perhaps most surprising is not the lack of evidence that adjustment programs have contributed to malnutrition, but the failure of adjusting countries to show a better performance in this area than the group of non-adjusting countries, many of which suffered equally severe recessions, drought and other external shocks. Given that some severely constrained countries managed to improve their nutritional status during the eighties, it appears that much more can be done to improve nutritional status in adjusting as well as non-adjusting countries.

## VI. SCHOOL ENROLLMENT

One of the most important functions of education is to provide a means of achieving literacy in the population. Literacy has conflicting definitions in different countries. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), literacy is defined as the ability to read and write simple sentences. Although literacy can itself be considered as an ultimate achievement of a society, it also enhances people's capabilities and extends functioning. Literacy is therefore an important indicator of the standard of living because it is a good proxy for many important functions and capabilities.

In this section the changes in educational status of the population are monitored by means of primary school enrollment ratios. Table 16 presents the average of gross enrollment ratios for various country classifications according to the adjustment loans received. There are wide variations in enrollment ratios among developing countries. The countries with extremely low ratios are Burkina Faso, Ethiopia, Guinea, Mali, Niger, and Somalia, where only between 20 and 30 percent of the children are enrolled in primary schools.

Among intense adjusting countries, the total average enrollment ratio increased substantially between 1975 and 1980 but decreased from 1980 to 1985. However, country differences are significant. For example, in Pakistan, the enrollment ratio declined during the 1975 and 1980 period and improved during the 1980 and 1985 period. Tanzania, a country that had been known for its outstanding educational performance during the 1960s and 1970s, had declining

Table 16: Gross Enrollment Ratio (Primary)

Country Classification	Countries	1970	1975	1980	1985
IAL	25	77.4	83.2	94.2	90.1
PRE-1986	9	67.3	70.8	75.5	84.0
POST-1985	18	52.4	65.5	68.4	73.7
NAL (TOTAL)	33	73.5	80.3	86.0	91.1
NAL+	18	76.9	82.4	89.9	98.3
NAL-	15	69.4	77.7	81.3	82.6

gross enrollment ratios from 92.8 in 1980 to 72.2 in 1985. During the same period, the real per capita government expenditure on education declined substantially in Tanzania. Zimbabwe made the most progress in improving the enrollment ratio. This achievement can be attributed to a large increase in government expenditure on education during the same period.

Many of the NAL countries have improved their enrollment ratio between 1980 and 1985. In Mozambique, however, the enrollment ratio declined substantially (from 99.2 in 1980 to 85.8 in 1985). Oman demonstrated the most improvement in the enrollment ratio. This improvement is mainly attributed to a substantial increase in government expenditure on education (which increased from a value of \$114.7 in 1980 to \$560.0 in 1986).

Table 17 provides the net enrollment ratios for primary education in developing countries. These ratios show 6-11 year olds enrolled as a proportion of the 6-11 year olds in the population. This table supports our earlier finding of declining primary enrollment in the intensely adjusting countries with net primary enrollment decreasing from 76 percent in 1980 to 74 percent in 1985.

It may be argued that the immediate impact of the recession may be on the quality of education rather than the quantity of enrollments as indicated by the ratios. In this study we use student-teacher ratio as a proxy of the quality of education. The average values of this ratio for different country

Table 17: Net Enrollment Ratios (Primary)  
(6-11 years old)

Country Classification	Number of Countries	1965	1970	1975	1980	1985
IAL	25	59.9	62.8	69.6	76.1	74.4
PRE-1986	9	53.9	54.7	57.6	62.6	70.7
POST-1985	18	50.9	55.6	59.5	62.5	67.1
NAL+	18	63.2	64.9	70.0	78.5	86.0
NAL-	15	48.7	55.3	62.8	66.1	67.7



Table 18: Student-Teacher Ratio

Country Classification	Number of Countries	1965-70	1970-75	1975-80	1980-85
IAL	25	39.6	38.9	37.0	35.3
PRE-1986	9	35.2	33.8	34.2	34.2
POST-1985	18	40.1	41.6	39.7	39.2
NAL (TOTAL)	33	39.6	38.8	36.7	34.6
NAL+	18	38.4	37.1	34.2	34.3
NAL-	15	41.1	40.7	39.6	35.1

classifications are presented in Table 18. It is interesting to observe that the ratio has improved substantially for IAL and NAL- countries. This ratio depends on the number of students enrolled and the number of teachers. Because of the cuts in government expenditure on education which happened in the IAL countries, the growth rate of teachers is likely to have declined. Table 19 gives the growth rate of primary school teachers. The growth slowed down from 4.2 percent in 1975-80 to 2.1 percent in 1980-85, but at the same time, the growth of students enrolled slowed even more resulting in an improvement of the student-teacher ratio.

Why has the growth of students slowed down when there are teachers available in schools? It is difficult to answer this question without going into detailed country studies. One possible explanation may be that when families are faced with falling incomes, they withdraw their children from school to save on educational expenditures, and to have the children contribute to household income. Whatever the reason, declining enrollment ratios are inconsistent with long-term growth and development objectives. As such they are likely to be detrimental to the objectives of the adjustment process as well.

Table 19: Growth Rate of Primary School Teachers

Country Classification	Number of Countries	1965-70	1970-75	1975-80	1980-85
IAL	25	7.2	6.2	4.2	2.1
PRE-1986	9	4.2	4.2	3.7	5.4
POST-1985	18	0.3	6.7	1.6	1.2
NAL (TOTAL)	33	2.9	3.2	2.3	4.0
NAL+	18	2.7	2.2	1.9	3.8
NAL-	15	4.2	9.0	4.1	4.9

## VII. CONCLUDING REMARKS

Perhaps the most surprising findings of this paper relate to the lack of response in absorption to adjustment measures. Intensely adjusting countries show more growth in private consumption during 1985-87 than non-adjusting countries. The available data on a few countries show that the ratio of total government expenditures to GDP is increasing. However, a closer examination of government expenditures shows that real per capita expenditures on the social sectors are decreasing in some of these countries, especially the intensely adjusting ones. This decline is particularly worrisome in the education sector where the reduction in real per capita government expenditure for the sector is accompanied by decreasing primary enrollment rates. The study cautions that if measures are not taken to protect government expenditures on the social sectors, some developing countries may be faced with an erosion of one of the pillars of economic growth: human capital. This is inconsistent with the objective of sustainable long-term growth central to adjustment policies.

In spite of this, the review of trends in social indicators does not reveal a discernible difference between adjusting and non-adjusting countries. Though within-group variation is large, the overall trends in health indicators are improving for all country groups: declines in infant and child mortality rates are continuing; immunization coverage is increasing; and by and large, nutrition indicators are positive with the notable exception of the Africa region, where the degree of undernutrition has worsened between 1980 and 1986 in about one-third of the Sub-Saharan countries. In summary, the paper found that, regardless of adjustment status, developing countries achieved progress in social indicators during the eighties. However, progress was slowest in countries that already had the worst social indicators.

The review of how the social aspects of adjustment are being addressed in the design of adjustment programs shows that, while the Bank has made progress in the treatment of the social costs of adjustment, the current approach appears too much ad hoc and without sufficient reference to the fundamental flaws in the social sectors.

What do these messages suggest for the Bank? The fact that this paper is unable to detect any discernible difference in social indicator trends

between adjusting and non-adjusting countries probably says more about the usefulness of the specific country groupings used than about the effects of any sets of adjustment policies on social outcomes. What is important, is that while the paper did not find any evidence that adjustment policies per se had an adverse effect - perhaps with the notable exception of declining primary school enrollment ratios in intensely adjusting countries - on any of the social indicators examined. The paper also did not find evidence that adjustment policies accelerate social progress where this is most needed. These policies should be faulted for that and the focus on long-term poverty reduction (social indicator improvements) should be more integrated in the SAL design.

The study therefore recommends the systematic integration of long-term poverty reduction (social indicator improvements) objectives in the adjustment process. Despite the overall social progress observed, the unacceptably high levels of mortality and malnutrition prevailing in many developing countries raise the question whether more can be done to improve social conditions even during the transition period of adjustment. The record shows that social progress can be achieved and maintained under austere economic conditions. Given the inefficiencies in the social sectors, there is scope for improvements in social indicators without large budgetary consequences.

Compensatory interventions are required to mitigate the transitory social costs of adjustment on readily identifiable groups. However, the study's findings suggest that greater attention needs to be devoted to strengthening the analytic underpinnings of these interventions. The longer than anticipated transition period of adjustment coupled with the frequency and magnitude of compensatory interventions may render the current ad hoc approach unsustainable. In parallel to the design of short-term compensatory interventions, it is crucial to maintain the emphasis on the development of longer-term social sector strategies through economic and sector work and social sector lending, to guarantee sustainable success against the correlates of poverty.

## ANNEX

## SAL Conditionality and Social Aspects of Adjustment

The Annex briefly reviews the adjustment lending conditionalities in selected policy areas and the Bank-supported interventions to assist particular groups during the adjustment period.<sup>1</sup> The overview is based on a review of the President's Report on Structural Adjustment Loans and on information in the Adjustment Lending Conditionality and Implementation Database (ALCID).<sup>2</sup> The policy areas selected include social policies, wages and employment, subsidies, and capital and recurrent expenditures. They account for about 9 percent of the total number of conditions associated with 199 Structural Adjustment Loans (SALs) and sector adjustment loans (SECALs). Therefore an average of 40 conditionalities has been specified under these programs. The percent of conditions recorded in the ALCID as fully or substantially implemented is used as a proxy to assess implementation.

## Number of Conditions in Selected Policy Areas

Public Capital/Investment Expenditure	305
Public Recurrent Expenditure	155
Wages and Employment	163
Subsidies	42
Social Sectors	77
Other Conditions	7,259
Total	8,001

Source: ALCID

---

<sup>1</sup> For more details see also Ribe, H., et al (1990), "How Adjustment Can Help the Poor: The Experience in the World Bank." Discussion Paper Number 71, The World Bank.

<sup>2</sup> For a description of ALCID - see "Adjustment Lending Conditionality and Implementation Data -- An Analytical Guide." Industry Development Division, PPR. June 13, 1989.

Public Recurrent and Capital Expenditures. There are 460 conditionalities coded under these policy areas in the ALCID. They account for about 5 percent of all conditionalities in the ALCID. The overall objective of these conditions is to reduce the government budget deficit and rationalize the public expenditure program. Only 40 percent are legal conditions. Average implementation rates for these conditions range from 75 percent to 100 percent across the Regions with the exception of EMENA and Asia where the implementation rate for conditions relating to capital expenditures was substantially lower (roughly 50 percent).

The nature of conditions in this category relate to the borrower government and the World Bank reaching agreements on the size and composition of public investment program, the recurrent expenditure allocation, the reduction of central government real expenditures, the overall size of the budget, and on the rationalization of user fee structure.

Only few SALs include explicit conditions to protect the social sectors from undue expenditure cuts. For example, SAL I and II for Malawi had conditions to allocate an increasing share of public expenditures to key economic and social sectors such as agriculture, education, health, housing, and water; and two earlier SACs for Ghana that stipulated the development of guidelines for resource allocation for health, education, and agriculture. On the other hand, many of the adjustment lending conditions in these policy areas make broad references to protecting the share of the public investment and/or expenditure program allocated to priority sectors or preparation of "core projects" for the public investment program.

Wages and Employment. The ALCID lists 163 conditions in this policy area of which 86 percent were legal conditions. They are concentrated in 22 adjustment programs, a majority, that is, 15 are in the Africa Region followed by 3 in the LAC Region. The average implementation rate in these Regions is around 74 percent. Policy measures are aimed at addressing the fiscal constraint through reduction in the public wage bill. The policy options include reduction of public wages and/or reduction of public employment.

Measures in this policy area include retrenchment or freeze in the size of the civil service (Central African Empire, Congo, Costa Rica, Guinea Bissau, Gambia, Ghana, Guinea, Senegal), reductions in government salary expenditures (Gabon), and controls on growth in salaries (Costa Rica, Chile,

Côte d'Ivoire, Korea, Sao Tome). In the case of Asia, this included the reduction of wages in real terms under Korea SAL I, a measure which the Government had already undertaken prior to the appraisal of the SAL.

Subsidies. There are 42 conditions coded in this policy area in the ALCID. About 48 percent are legal conditions and another 14 percent were conditions of negotiations. Note that this does not include covenants dealing with subsidies under investment projects. However, subsidy-related conditionalities that relate to introduction and rationalization of user fee structures are coded under the policy areas relating to public expenditure. Implementation rate of conditions in this policy area range from 7 percent to 100 percent across the Regions. The objective of SAL conditions in this policy area is the reduction or removal of government subsidies to correct price distortions, improvements in economic efficiency, and where appropriate, improvements in the equity and efficiency of subsidy programs through better targeting.

Conditions in this policy area include reduction in input subsidies in the agriculture sector (Brazil Agriculture Export Development), the elimination or reduction of food subsidies (Bangladesh, Costa Rica SAL II, Tunisia), reduction of housing subsidies to public servants (Côte d'Ivoire), reduction of government subsidies to parastatals (Côte d'Ivoire SAL III, Senegal SAL III), and the introduction of food stamp program for tortillas (Mexico Agriculture Sector Loan).

Social Policies. The ALCID includes policies that deal with the social costs of adjustment under this policy area. Seventy-seven conditions in 9 countries are coded under this category. Less than half were legal conditions. The objective of measures in this policy area is to cushion the impact of adjustment especially during the transition period. The implementation rate in LAC was the highest - 100 percent. Examples of policy conditions in this area include improvement of the preventative health care system in Chile (SAL III), implementation of a program on social and environmental issues under an energy sector loan in Columbia, and expansion and monitoring of nutritional programs under an agriculture sector loan in Mexico. Examples of social policy conditions in the Africa Region include the establishment of a fund to assist laid-off workers (Gabon), preparation of a monitoring system of the social costs of adjustment (Burundi: legal

condition), conducting socio-economic analysis (Guinea), preparation of a food security plan (Kenya: legal condition), and improving the safety net program for the poor (Mozambique).

### Interventions to Assist Particular Groups During Adjustment

The Bank has made progress in the treatment of the social costs of adjustment in the design of SALs. OED's evaluation of seven SALs in Korea, Malawi, Mauritius, Turkey, Yugoslavia approved only a few years earlier, that is, FY81-83, showed that ... "although the Bank was cognizant of the adverse social dimensions of adjustment, the SAL programs provided little in the way of compensatory income-sustaining measures. Nor did the Bank monitor the social effects ..., in part because insufficient thought was given to what needed to be measured and how."<sup>3</sup> Yet, a recent review of how social costs are addressed in SALs identified 26 SALs in FY86-89, that included explicit measures to address the social costs of adjustment.<sup>4</sup> The current record shows an upward trend in both the frequency and magnitude of Bank-supported compensatory measures in countries undergoing adjustment. The nature of these measures is described below.

As part of the effort to assist countries with the rationalization of their public expenditure programs, the Bank often includes special measures in SALs to protect the poor and vulnerable groups from the adverse impact of expenditure cuts. Many Bank supported SALs require the reallocation of government expenditures to priority sectors that most benefit the poor, improvements in the efficiency and equity aspect of social expenditures and better targeting of subsidy programs. For instance in Chile where about 20 percent of expenditures under the milk distribution program was benefitting the highest 40 percent income group, better targeting of the milk distribution program was part of the condition for release of the second tranche under SAL III. As part of the Education sector loans in Ghana, Morocco and Senegal, the Bank is helping reorient education expenditures on primary education. As part

---

<sup>3</sup> 1988. "OED Annual Review of Project Performance Results for 1987," OED, The World Bank, p. 93.

<sup>4</sup> Carvalho, Sonya, 1989, "The Treatment of Social Costs in Bank-supported SALs." Strategic Planning and Review Department, The World Bank.



of an agricultural sector loan in Mexico, pilot programs of food assistance to low-income families in rural areas was introduced.

In countries undergoing adjustment, special interventions are often required to assist laid-off public workers who are unable to find alternative employment in the private sector during the early stages of the adjustment period. For instance, as part of Bank support adjustment programs Central African Republic, Congo, Gabon, Gambia and Guinea, have provided severance payments to laid-off public workers and, in some cases, to voluntary departures. Madagascar and Ghana are providing special retraining programs to retrenched workers. Under SAL I, Mauritania is helping laid-off workers from the iron ore enterprises to resettle as private farmers in the South. In addition the Government is providing special credit to help other laid-off public employees to establish small businesses.

In some cases self-standing projects have been designed to help address the difficulties associated with the transitional period of adjustment. Examples include the Ghana Program of Action to Mitigate the Social Costs of Adjustment (PAMSCAD), Guinea Social Economic Development Support Project (SDSP), Guinea-Bissau Social and Infrastructure Relief Project (SIRP) and Bolivia Emergency Social Fund (ESF). Components under Ghana's PAMSCAD include labor-intensive priority public works programs, food-for-work projects for the rural unemployed and supplemental feeding and nutrition education for mother and children. Under the SDSP, the Bank helped set up a Special Intervention Fund to help finance small-scale income generation and social assistance projects in Guinea. The project in Guinea-Bissau includes an NGO Fund to finance specific subprojects to be prepared and implemented by NGO's.

Finally, the Bank maintains a collaborative working relationship with other donors in addressing the social costs of adjustment. At the regional level, the multi-donor financed Social Dimensions of Adjustment Project in Africa (SDA) is sponsored by the Bank and UNDP. At the country level, the Bank and UNICEF work closely in Ghana's PAMSCAD project. UNICEF is active in the nutritional surveillance and the food for work activities under this program. Under the SAL II in Senegal, ILO is providing assistance with credit, training and project identification in the creation of small-scale enterprises for laid-off employees from public sector enterprises. USAID also provided funds to these employees in the form of separation payments to be

used as seed money. In Guinea-Bissau (SAL I), UNDP and other donors are assisting the Government with a program to retrain and resettle laid-off civil servants into agricultural activities in the villages. In Nepal, UNDP is supporting the SAL by providing the financing for technical assistance activities to improve the administration of development expenditures.

### Conclusion

A brief overview of conditions in selected policy areas shows that public expenditure reduction, salary and employment restraints, and removal of subsidies are common policy conditions in SALs. The distributional consequences of the conditions in these policy areas manifest themselves in declines in real wages or employment cutbacks for wage earners and higher prices for the consumers. Capital expenditure cutbacks also have the effect of reducing employment generation opportunities. On the other hand, the Bank's adjustment lending experience also shows that even under these conditions, the poor or new poor are able to gain from better targeting of social expenditures (Chile, Ghana) and targeted employment schemes (Guinea). However, the ALCID shows that, on the whole, social policies, that is, those aimed at protecting the poor and other vulnerable groups during adjustment, are still evolving both in their design and frequency.

What is apparent from this review is that, at this stage, the current approach to addressing the social costs of adjustment appears too much ad hoc with the issue being raised largely in SAL documents. However, the Bank's efforts to integrate welfare concerns in its lending strategy to countries undergoing adjustment should also be addressed in public expenditure reviews (PERs), policy framework paper (PFPs), and country assistance strategy papers (CSPs).

A majority of the measures proposed in SALs to protect the poor during adjustment relate to the reallocation of public expenditures in favor of the productive and social sectors and better targeting of these expenditures on the most needy. An opportunity to ensure the implementation of these measures is, to state up front in the Bank's public expenditure and investment reviews, the need to minimize the welfare loss during adjustment as one of the explicit objectives. While SALs by and large require satisfactory review of public investment programs, these reviews have not as yet focused on the social

sectors in a systematic manner.<sup>5</sup> For example, this review was able to identify only the Morocco SAL where explicit provision was made for technical assistance, training, and institutional support to enhance government capacity to monitor both current and investment expenditures and to ensure that efficiency and equity concerns are met.

Similarly, the experience with PFPs shows that "...in general, social policies have been downplayed in PFPs and that the social impact of policies was discussed in PFPs only in a few cases that is, Nepal, Guinea and Bangladesh."<sup>6</sup> CSPs also appear to provide an appropriate occasion for the Bank to articulate how the social costs of adjustment should be handled both in the Bank's dialogue with governments and in its lending program. Current operational guidelines require CSPs to "Evaluate the prospect for implementation of proposed policy agenda, taking into account political and administrative constraints, ...and...Distinguish between the most desirable and the most likely policy paths, and highlight alternative policy options, given the above constraints."<sup>7</sup>

In other words, the current Bank practice provides potential scope beyond SAL documents to develop a coherent medium-term country strategy that anticipates the social costs of adjustment and incorporates appropriate mitigating measures in developing the overall policy agenda and country assistance strategy. Increased attention should therefore be given to extending to PERs, PFPs, and CSPs the analysis of the social costs of adjustment and the formulation of an integrated strategy to mitigate these costs during the transition period.

---

<sup>5</sup> For details see de Melo, Martha, 1987, "Public Investment/Expenditure Reviews: the Bank's Experience". CEC, The World Bank.

<sup>6</sup> 1988 "Policy Framework Papers: First Review of Experience, The World Bank, p. 12.

<sup>7</sup> Operational Manual Statement 1.12, para. 11.

## ENDNOTES

1. Behrman, Jere A. and Anil Deolalikar (1989), "Impact of Macro Economic Adjustment on the Poor and on Social Sectors in Jamaica." Special Supplement in OED Program Performance Audit Report on Jamaica, Report No. 8018, The World Bank.  
  
Glewwe, Paul and Dennis de Tray, 1987. "The Poor During Adjustment: A Case Study of the Côte d'Ivoire." LSMS Working Paper No. 47, The World Bank, Washington, D.C.  
Glewwe, Paul and Dennis de Tray, 1989. "The Poor During Adjustment: A Case Study of Peru." LSMS Working Paper No. 56, The World Bank, Washington, D.C.  
  
Kakwani, Nanak, 1989. "Testing for Significance of Poverty Differences: With Application to Côte d'Ivoire." LSMS Working Paper No. 62, The World Bank, Washington, D.C.  
Kanbur, Ravi, 1987. "Poverty Alleviation Under Structural Adjustment: A Conceptual Framework and Its Application to the Côte d'Ivoire."  
Laraki, Karim, 1989. "Food Subsidy Programs: A Case Study of Price Reform in Morocco." LSMS Working Paper No. 50, The World Bank, Washington, D.C.
2. Development Committee Pamphlet No. 13. See also technical background paper "Protecting the Poor During Periods of Adjustment," Country Policy Department, Discussion Paper 1986-7, The World Bank, Washington, D.C.
3. Operational Manual Statement 2.01, Circular No. Op 87/06.
4. Cornia, C.A., Richard Jolly, and Frances Stewart, eds. (1987), Adjustment with a Human Face. Volume 1: Protecting the Vulnerable and Promoting Growth. New York: Oxford University Press.
5. UNICEF 1989 State of the World's Children, New York, 1989.
6. Preston, Samuel (1986), "Review of Richard Jolly and Giovanni Andrea Cornia, editors, The Impact of World Recession on Children," Journal of Development Economics.
7. Behrman, Jere A. and Anil Deolalikar (1989), op.cit.
8. Hill, Kenneth and A. Pebley (1989), "Levels, Trends and Patterns of Child Mortality in the Developing World" (unpublished).
9. PAHO, "Health and Development: Repercussions of the Economic Crisis," 1989, Washington, D.C.
10. Sahn, David (1989), "Fiscal and Exchange Rate Reforms in Africa: Considering the Impact upon the Poor." Cornell University. Prepared for the African Bureau, USAID. (unpublished).

11. Hicks and Streeten (1979),
12. Bardhan, Pranab (1974),
13. Hill, Kenneth and A. Pebley (1989), op.cit.
14. United Nations, 1989.  
Alderman, 1989.
15. DHS data are produced from actual surveys by the Institute for Resource Development, Colombia, Maryland. DHS infant mortality rates are generally much lower than those published in the World Development Report (WDR).
16. World Health Organization, "World Immunization Reaches 2/3 Mark." Press Release WHO/35, August 17, 1989, Geneva.
17. Paulino, Leonard and Shen Shen Tseng (1980). "A Comparative Study of FAO and USDA Data on Production, Area and Trade of Major Food Staples." Research Report No. 19, International Food Policy Research Institute.
18. Reutlinger, S. and M. Selowsky, 1976. "Malnutrition and Poverty." World Bank Occasional Paper No. 23, Washington, D.C.
19. Sukhatme, P.V., 1981. "On Measurement of Poverty," Economic and Political Weekly, August 8, pp. 1319-1324.  
  
Sukhatme, P.V., 1981a. "On Measurement of Undernutrition: A Comment," Economic and Political Weekly, Vol. 16. June 6.  
  
Sukhatme, P.V., 1982. "Poverty and Malnutrition." Sukhatme, P.V. (ed.), New Concepts in Nutrition and their Implications for Poverty. Maharashtra Association for the Cultivation of Science Research Institute, India.  
  
Srinivasan, T.N., 1981. "Malnutrition: Some Measurement and Policy Issues," Journal of Development Economics, Vol. 8, 3-19.
20. United Nations, 1989
21. United Nations, 1987. "The First Report on World Nutrition."

PRE Working Paper Series

	<u>Title</u>	<u>Author</u>	<u>Date</u>	<u>Contact for paper</u>
WPS443	The Inflation-Stabilization Cycles in Argentina and Brazil	Miguel A. Kiguel Nissan Liviatan		
WPS444	The Political Economy of Inflation and Stabilization in Middle-Income Countries	Stephan Haggard Robert Kaufman	June 1990	A. Oropesa 39176
WPS445	Pricing, Cost Recovery, and Production Efficiency in Transport: A Critique	Rachel E. Kranton	June 1990	W. Wright 33744
WPS446	MEXAGMKTS: A Model of Crop and Livestock Markets in Mexico	Gerald T. O'Mara Merlinda Ingco	July 1990	C. Spooner 30464
WPS447	Analyzing the Effects of U.S. Agricultural Policy on Mexican Agricultural Markets Using the MEXAGMKTS Model	Gerald T. O'Mara	July 1990	C. Spooner 30464
WPS448	A Model of U.S. Corn, Sorghum, and Soybean Markets and the Role of Government Programs (USAGMKTS)	Richard E. Just	July 1990	C. Spooner 30464
WPS449	Analysis of the Effects of U.S. Macroeconomic Policy on U.S. Agriculture Using the USAGMKTS Model	Richard E. Just	July 1990	C. Spooner 30464
WPS450	Portfolio Effects of Debt-Equity Swaps and Debt Exchanges with Some Applications to Latin America	Daniel Oks	June 1990	S. King-Watson 31047
WPS451	Productivity, Imperfect Competition and Trade Liberalization in the Côte d'Ivoire	Ann E. Harrison	July 1990	S. Fallon 38009
WPS452	Modeling Investment Behavior in Developing Countries: An Application to Egypt	Nemat Shafik	June 1990	J. Israel 31285
WPS453	Do Steel Prices Move Together? A Cointegration Test	Ying Qian	June 1990	S. Lipscomb 33718
WPS454	Asset and Liability Management in the Developing Countries: Modern Financial Techniques -- A Primer	Toshiya Masuoka	June 1990	S. Bertelsmeier 33767

PRE Working Paper Series

	<u>Title</u>	<u>Author</u>	<u>Date</u>	<u>Contact for paper</u>
WPS455	A Formal Estimation of the Effect of the MFA on Clothing Exports from LDCs	Junichi Goto	June 1990	M. T. Sanchez 33731
WPS456	Improving the Supply and Use of Essential Drugs in Sub-Saharan Africa	S. D. Foster	June 1990	Z. Vania 33664
WPS457	Financing Health Services in Africa: An Assessment of Alternative Approaches	Germano Mwabu	June 1990	Z. Vania 33664
WPS458	Does Japanese Direct Foreign Investment Promote Japanese Imports from Developing Countries?	Kenji Takeuchi	June 1990	J. Epps 33710
WPS459	Policies for Economic Development	Stanley Fischer Vinod Thomas	June 1990	WDR Office 31393
WPS460	Does Food Aid Depress Food Production? The Disincentive Dilemma in the African Context	Victor Lavy	July 1990	A. Murphy 33750
WPS461	Labor Market Participation, Returns to Education, and Male-Female Wage Differences in Peru	Shahidur R. Khandker	July 1990	B. Smith 35108
WPS462	An Alternative View of Tax Incidence Analysis for Developing Countries	Anwar Shah John Whalley	July 1990	A. Bhalla 37699
WPS463	Redefining Government's Role in Agriculture in the Nineties	Odin Knudsen John Nash	August 1990	K. Cabana 37946
WPS464	Does A Woman's Education Affect Her Husband's Earnings? Results for Israel in A Dual Labor Market	Shoshana Neuman Adrian Ziderman	August 1990	V. Charles 33651
WPS465	How Integrated Are Tropical Timber Markets?	Panos Varangis	August 1990	D. Gustafson 33714
WPS466	Is There An Intra-Household Kuznets Curve?	Lawrence Haddad Ravi Kanbur	August 1990	J. Sweeney 31021
WPS467	Structural Adjustment and Living Conditions in Developing Countries	Nanak Kakwani Elene Makonnen Jacques van der Gaag	August 1990	B. Rosa 33751
WPS468	Does the Structure of Production Affect Demand for Schooling in Peru?	Indermit Gill	August 1990	M. Abundo 36820